A STUDY TO ASSESS THE EFFECTIVENESS OF INDIVIDUALIZED EDUCATION ON LIFESTYLE MODIFICATION AMONG POST MYOCARDIAL INFARCTION PATIENTS IN GKNM HOSPITAL, COIMBATORE.

Reg. No: 301212306

A DISSERTATION SUBMITTED TO THE TAMILNADU Dr. M.G.R. MEDICAL UNIVERSITY, CHENNAI, IN PARTIAL FULFILLMENT OF REQUIREMENT FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING

April 2014

A STUDY TO ASSESS THE EFFECTIVENESS OF INDIVIDUALIZED EDUCATION ON LIFESTYLE MODIFICATION AMONG POST MYOCARDIAL INFARCTION PATIENTS IN GKNM HOSPITAL, COIMBATORE.

Reg. No: 301212306

Approved by

_____	_____
EXTERNAL	**INTERNAL**

A DISSERTATION SUBMITTED TO THE TAMILNADU Dr. M.G.R. MEDICAL UNIVERSITY, CHENNAI, IN PARTIAL FULFILLMENT OF REQUIREMENT FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING

April 2014

CERTIFICATE

This is to certify that the dissertation entitled **A STUDY TO ASSESS THE EFFECTIVENESS OF INDIVIDUALIZED EDUCATION ON LIFESTYLE MODIFICATION AMONG POST MYOCARDIAL INFARCTION PATIENTS IN GKNM HOSPITAL, COIMBATORE** is submitted to the Faculty of Nursing, The Tamil Nadu Dr. M.G..R Medical University, Chennai. It is a bonafide work done by **Reg. No. 301212306** in partial fulfillment of the requirement for the award of the degree of Master of Science in Nursing, Branch-I Medical Surgical Nursing, Sub Specialty - Cardiovascular and Thoracic Nursing, during the academic year 2013-2014.

Prof. JAENY KEMP, M.Sc (N)., Ph.D (N).,

Principal,

Institute of Nursing,

G. Kuppuswamy Naidu Memorial Hospital,

Coimbatore - 641 037,

Tamilnadu.

A STUDY TO ASSESS THE EFFECTIVENESS OF INDIVIDUALIZED EDUCATION ON LIFESTYLE MODIFICATION AMONG POST MYOCARDIAL INFARCTION PATIENTS IN GKNM HOSPITAL, COIMBATORE.

APPROVED BY THE DISSERTATION COMMITTEE IN MAY 2013

1. **RESEARCH GUIDE: ...……..**

Prof. JAENY KEMP, M.Sc (N)., Ph.D (N).,
Principal,
Institute of Nursing,
G. Kuppuswamy Naidu Memorial Hospital,
Coimbatore - 37.

2. **SUBJECT GUIDE: ……..**

Prof. P.VIJI. M.Sc. (N)., Ph.D (N).,
Professor,
Institute of Nursing,
G. Kuppuswamy Naidu Memorial Hospital,
Coimbatore - 37.

3. **MEDICAL GUIDE: ……**

Dr. S. NATARAJAN,MD.,MNANS.,DM., FICS.,FAPSC.,
Head of the Department, Cardiology,
G. Kuppuswamy Naidu Memorial Hospital,
Coimbatore - 37.

A DISSERTATION SUBMITTED TO THE TAMILNADU Dr. M.G.R. MEDICAL UNIVERSITY, CHENNAI, IN PARTIAL FULFILLMENT OF REQUIREMENT FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING

April 2014

ACKNOWLEDGEMENT

"The LORD will accomplish what concerns me; Your loving kindness,
O LORD, is everlasting;"

Psalms 138:8

It is my pleasure and privilege to record my deep sense of gratitude to all who have contributed to the accomplishment of this effort.

With a profound sense of gratitude I praise and thank **The Sovereign, Almighty God,** in whom is hidden all treasures of wisdom and knowledge and without his guidance, abundant mercy and all sufficient grace no work will be accomplished. I praise, worship, adore and thank him, for his unfathomable love and awesome blessings on me to fulfill this task successfully for the glory of his name.

I am indeed grateful to **Dr. Ramkumar Raghupathy, M.S (Gen Surg)., M.Ch (Paed Surgery)., FIAPS., MBA (Hospital Management),** the Dean, GKNM Hospital for giving me this opportunity to pursue my studies in this prestigious institution.

My deepest, whole hearted gratitude is to, **Prof. Jaeny Kemp, M.Sc (N)., Ph.D (N).,** Principal, Institute of Nursing, GKNM Hospital, a benevolent personality, who nurtured me in the path of scientific research. Her care, valuable guidance , constant support and encouragement led me throughout the process of this study.

I am highly indebted to my medical guide **Dr. S. Natarajan, MD., MNANS., DM., FICS., FAPSC.,** Head of the Department, Cardiology, GKNM Hospital, for his rich guidance and valuable directions and for the interest shown towards the research work, without his kind help, this work could not have been completed successfully.

I am indebted to owe my heartfelt deepest overwelming gratitude to my guide and respected teacher **Prof. P. Viji**, **M. Sc (N)., Ph.D (N).,** Medical Surgical Nursing, GKNM Institute of Nursing, a compassionate personality, for her expert guidance, valuable suggestions, insight, constant encouragement, loving attitude, patience and personal interest, which made this study a fruitful learning experience. Words are not enough to express my heartfelt gratitude for leading my path till the end.

I express my special thanks Dr**. P.K Sivakumaran, M.Sc., MBA., M.Phil., Ph.D.,** Statistician, for his tireless effort that was sustained with major commitments and furious energy bonded with incredible patience in completing the statistical procedures.

I feel fortunate to express my sincere heartfelt thanks to **Prof. C. Deborah Packiajothi, M.Sc (N).,** M.Sc.Nursing Coordinator and HOD Medical Surgical Nursing Department**, Prof. P. Shanthi, M.Sc(N)., Mrs.Meenakumari. C, M.Sc (N)., Mrs. Revathy. D, M.Sc (N)., and Mrs. Annie Freeda. A, M.Sc (N).,** Lecturers of Institute of Nursing, GKNM Hospital, for loving support, timely concern, insightful comments, valuable suggestions and constructive criticism at different stages of my work.

I also take this opportunity to express my deep sense of gratitude to all **Subject Experts** from the GKNM Hospital and other Nursing Institutions for validating the tool of the study. They were kind enough to go through my tool and guided me in the direction to proceed.

I also thank our librarian **Mrs.Indira Gandhi**, **M.A., MLIS., Institute of Nursing** for her kind co-operation and timely help, loving care and support throughout this study.

My immense gratitude and thanks to **Mrs. Anuradha Ramakrishnan, M.A. English., M.Ed.,** Lecturer**,** for editing the content of the manuscript.

I extend my sincere thanks to **Mrs. Tamilselvi, P.C.B.Sc (N)., Senior Nursing Tutor,** for editing the Tamil translation of the tool.

I extend my deepest gratitude to **Mr.Sriram B.PT., and Mr.Shivakumar B.PT.**, **Physiotherapists and Nurses** in the cardiology wards of GKNM Hospital, for their support and momentary guidance during the study .

I extend my heartfelt gratitude towards each of my **Patients** who participated in the study and extended their cooperation throughout the period of data collection.

I have immense pleasure in thanking **Ms. Jasmine Josheela Ms. Manimozhi** and **Ms. Unis Raju** for timely support and help in Tamil translation.

I am greatly indebted and I dedicate this study to my beloved parents, **Mr. S. Rajendran** and **Mrs. G. Ponnamma Rajendran** and my lovable brother **Mr. Ebenezer Sanjeev. R** who are my strong pillars of support and made my path easy through their ceaseless prayers, unconditional love, caring, quiet understanding, untiring endurance, strong encouragement and endless patience, as a healing unity throughout this study, without which I would not have accomplished anything.

I sincerely and wholeheartedly express my overwhelming gratitude, love and wishes to my beloved friend **Ms. Manickha Vasuki. S** for her constant companionship, enduring help, loving concern, quiet understanding and appropriate suggestions throughout the study.

I wish to put on record my gratitude to each of my **Friends, Classmates, Seniors, Juniors** and **all well wishers** for their encouragement, forbearance, enthusiasm, help and enduring support and companionship throughout and particularly during the difficult circumstances that prevailed during the study period.

I also thank **Mr.Kumaran, Computer Park**, for the professional help which made me to bring this manuscript clearly, legibly and effectively.

Above all my sincere thanks and gratitude to all those who directly or indirectly helped me in the successful completion of this thesis.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

CHAPTER - I

INTRODUCTION

“A sound heart is the life of the body.”

Proverbs 14:30 (NKJV)

Life is a precious, God given gift to mankind. Heart beat represents life and lack of it pronounces death. The heart pumps blood throughout the body from conception till death. A healthy heart is essential to sustain life. But various cardiovascular diseases disrupt this essentiality.

Cardiovascular disease is the leading cause of preventable death. According to the WHO statistics 2011 more people died from cardiovascular diseases annually than from any other cause. An estimated 18 million people died from cardiovascular diseases during the year 2008, representing 30% of global death. Out of this 8 million deaths were due to coronary artery disease.Coronary artery disease occurs when the myocardium is deprived of oxygen. If unattended it causes tissue damage, ischemia and leads to myocardial infarction.**(WHO, 2011).**

Heart attack or myocardial infarction remains the top priority in many research studies worldwidebecause of the attributable cardiovascular disease, which is the leading cause of death, in spite of giant strides being made in medical field. According to the Centers for Disease Control and Prevention, the coronary heart disease accounted for around 71% of heart disease mortalities in the United States in the year 2002.**(http://www.medindia.net/patients/lifestyleandwellness/heartattack-lifestyle-risks.,2011).**

Myocardial Infarction (MI) develops when the myocardium is deprived of oxygen. It is a dynamic process in which more than one region of the heart experiences a severe reduction in blood supply due to lack of coronary blood flow which subsequently causes necrosis or death of the myocardial tissues. When the plaque gets accumulated in the walls of the coronary artery, the artery narrows and leads to the development of coronary heart disease. When fat accumulates heavily in a coronary artery it reduces the oxygen-rich blood supply to the heart muscle. Blood begins to clot in the surrounding muscle tissue and predisposes to a heart attack. Such

attack can lead to a greater disability or can ruin the life of an individual. (**Smeltzer SC., Bare BG., 2004).**

The process of plaque formation is termed as atherosclerosis. The risk factors associated with atherosclerosis are high blood pressure, smoking, diabetes and high cholesterol. They damage the endothelium and cause white blood cells, cholesterol, calcium and other substances to get deposited. Such occurrences won't happen overnight. It takes many years to form.

According to the World Health Organization 2011 report it was observed that few behavioral risk factors were responsible for 80% of coronary heart disease which includes tobacco use, physical inactivity and an unhealthy diet pattern.**(WHO, 2011).**

According to the inter heart South Asia study, it identified about nine risk factors for myocardial infarction. They were smoking, high blood pressure, obesity, abnormal lipids, alcohol consumption, high blood sugar, stress, lack of exercise, low fruit and vegetable consumption, which accounted for more than 90% heart attacks among Indians. **(Rajeev Gupta., et al., 2008).**

Knowledge on the risk factors of coronary heart disease in most regions of the world is unknown. Hypertension, diabetes, abnormal lipids, smoking, abdominal obesity, alcohol intake, psychosocial factors, irregular physical activity and low consumption of fruits and vegetables accounts for the most common cause of myocardial infarction worldwide affecting both males and females of all age groups. This finding suggests to prevent the premature causes of myocardial infarction. **(Salim Yusuf, et al., 2004).**

Case control studies indicated that high blood pressure, tobacco use, high low density lipoprotein cholesterol, low high density lipoprotein cholesterol, obesity with high waist hip ratio, diabetes, abnormal apolipoprotein, sedentary lifestyles, low consumption of vegetables and psychosocial stress are the most important determinants of cardiovascular disease in India.**(R.Gupta, et al., 2008).**

Diet remains the major modifiable risk factor for cardiovascular disease. An unhealthy diet practice increases the risk of myocardial infarction globally and accounts for 30% of population-attributable risk.Fruits and vegetables reduce the risk

for cardiovascular diseases if taken adequately. Most of the population consumes higher levels of salt than the recommended amount. High salt intake is an important determinant of high blood pressure and cardiovascular risk. Increased consumption of trans-fatty acids and saturated fats were directly linked to coronary heart disease. **(Romania Iqbal, 2011).**

Smoking is estimated to cause ten percent cardiovascular diseases. Almost 6 million people die due to tobacco use every year, both from active and passive smoking. By 2020, this number will increase to 7.5 million, which could account for about 10% global deaths. The highest incidence of smoking among men is present in the lower and middle-income generating countries. **(WHO, 2011)**

Approximately 3.2 million people die due to physical inactivity. People who are physically inactive have an increased risk of mortality ranging in between 20% to 30%. Regular physical activity reduces the risk factors of cardiovascular disease including diabetes and high blood pressure.**(Smith, S. et al., 2012).**

A number of studies from different countries have reported reduced coronary heart disease rates among those who regularly consumed mild to moderate amounts of alcohol as compared to those who remained abstinent from alcohol. In contrast, various studies have reported that heavy consumption of alcohol promotes the progression of atherosclerosis and binge drinking triggers acute myocardial infarction.**(Biyik, 2007).**

High blood pressure is estimated to cause 7.5 million deaths, which accounts for 13% of total deaths. It is a major risk factor for cardiovascular disease. The prevalence of increased blood pressure is similar in all income groups, although it is generally lowest in high-income populations. High cholesterol increases the risk of heart disease and estimated to cause 2.6 million deaths every year.

Overweight contributes to three million global deaths. Risks of heart disease increases with increasing body mass index. The prevalence of overweight is highest in middle-income countries. In the American regions, over 50% of women are obese. The highest prevalence of overweight among infants and young children are also found among the middle-income population.

The guidelines given for the secondary prevention for post myocardial infarction patients by the National Institute of Health and Clinical Excellence recommends that lifestyle advice in diet, physical activity, alcohol consumption, weight management and smoking cessation should be consistent. They also recommended to take into account of patients' current habits and recent changes and to inform the individual to improve the quality of life after infarction.**(J.S. Skinner,A Cooper, and G S Feder., 2007).**

NEED FOR THE STUDY

"The heart of education is the education of the heart"

- Harvey Mackay

Heart is a vital organ and it has to be protected from illnesses. If the individual has a disease, it has to be treated to prevent from further damages. During the year 1990, 15 million deaths occurred due to cardiovascular disease and 63% of them happened in developing countries. This will further increase by 2020 in those developing countries. The disease pattern is drastically increasing in Indians compared to the Western regions. The coronary artery disease prevalence in India is of four folds as compared to United States, and it is expected to be the largest killer by 2015.

Rapid urbanization, demanding and stressful jobs, life style modification, lack of physical activity and sedentary work has driven the Indians to the risks of coronary artery disease. The rates of coronary artery disease in metro cities like Delhi and Chennai had ranged between ten to twelve percentages. In Kerala it is still higher and contributes to 13 percentage of coronary artery disease. In India,hospitalizations due to cardiovascular disease were four folds higher than United States and Japan and six folds higher than China **(Kumar A, Sivakanesan R., 2009).**

According to the recent evidences the risk of developing cardiovascular diseases begins even before birth and starts fromfoetal development. This risk increases further during childhood, due to exposure to various risk factors such as physical inactivity, unhealthy diet, harmful use of tobacco and alcohol. **(Institute Of Medicine, 2010)**

There are several methods to help prevent future heart attacks and to make patients lead a comfortable life. But most often they restrict their own activities or rely on others advices and become cardiac cripples.**(American Heart Association Scientific Statement, 2004).**

In countries like India, the individuals are unaware of the benefits of counseling. Nurses by way of their familiarity with the patient, can play a vital role in correcting and motivating the attitudes in this regard. Life style modification among post myocardial infarction patient is an integral part of holistic living. It is one of the important present dayrequirementsto prevent myocardial infarction. It is the challenge of every individual to take up the appropriate degree of responsibility for his own health.**(Indian Heart Journal, 2007).**

Most important risk factors leading to myocardial infarction are cigarette smoking, hyperlipidemia, diabetes mellitus, obesity, sedentary lifestyles. A supportive educative system to address on knowledge acquisition, behavior control, decision making is definitely essential. Such educative system can guide and promote the cardiac patients to practice the lifestyle changes. **(American Heart Association, 2005)**

Researches prove that 90% of patients with previously identified coronary heart diseases have at least more than two life style related cardiovascular risk factors. Non modification of these lifestyle risk factors may increase the chance of reinfarction and delays recovery. **(Johnston DW, 1999)**

Good educational support given by nurses will help to restore the optimum level of health of myocardial infarction patient which will prevent further attacks. The investigator recognized the importance of individualized education and was self motivated to conduct this study. Patients may not be aware of the lifestyle modification after myocardial infarction. This made the researcher to prepare an individualized education on lifestyle modification about balanced nutrition, appropriate physical activity, rest and sleep, safe sex, stress reduction, cessation of smoking and alcohol. Such education will provide a base for individual attention and help to lead a healthy lifeafter myocardial infarction.

STATEMENT OF THE PROBLEM

A Study to Assess the Effectiveness of Individualized Education on Lifestyle Modification among Post Myocardial Infarction Patients in GKNM Hospital, Coimbatore.

OBJECTIVES

- To assess the lifestyle practices of post myocardial infarction patients.
- To assess the effectiveness of individualized education on lifestyle modification.
- To associate the lifestyle practices with the selected demographic variables.

OPERATIONAL DEFINITIONS

Lifestyle practices

Refers to lifestyle practices which is assessed among experimental group comprised of balanced nutrition, appropriate physical activity, rest, sleep safe sex, stress reduction, cessation of smoking and alcohol, which was assessed among experimental group.

Effectiveness

Refers to the extent to which the individualized education on lifestyle modification has achieved the desired effect as measured by gain in knowledge score.

Individualized Education

Refers to imparting knowledge on lifestyle modification to the experimental group who achieved the activities of daily living (ADL) score 6 and above as measured by Modified Katz Index activities of daily living scale.

Lifestyle modification

Refers to the desired lifestyle practices involving balanced nutrition, appropriate physical activity, rest, sleep, safe sex, stress reduction, cessation of smoking and alcohol.

Myocardial Infarction patients

Refers to patients who had their heart attack for the first time.

HYPOTHESIS

H_1: There will be a significant difference in the post test knowledge score on lifestyle modification among experimental and control group.

H_2: There will be a significant association between lifestyle practices and selected demographic variables among experimental group.

ASSUMPTIONS

1. Myocardial infarction patients may not have adequate knowledge about lifestyle modification after the first attack.

2. Individualized education will help them adopt ahealthy lifestyle.

CONCEPTUAL FRAMEWORK

Conceptual framework or a model is made up of concepts which are the mental image of a phenomenon. These concepts are linked together to express the relationship between them. A model is used to denote symbolic representation of the concepts.

The conceptual framework for this study is based on **"Orem's general theory of Nursing"** by Dorothea Orem. This theory focuses on the relationship between the nurse and the patient in order to meet the self care needs. It focus to render a capability to patient's self care needs and to maintain a state of good health, in order to regain normal to near normal state. The main components of the model are self care, self care agency, therapeutic self care demand, self care deficit and nursing action.

Self care

✦ It refers to the practice of all activities the individual initiates and performs on his own behalf to maintain life and health for his well-being

In this study, it refers lifestyle practices such as balanced nutrition, appropriate

physical activity, rest, sleep, safe sex, stress reduction, cessation of smoking and alcohol.

Self care agency

- It refers to the human ability for engaging in self care.

In this study, it refers to patient's awareness on engaging in self care activities, afterthe first attack, who were treated medically or underwent angioplasty.

Therapeutic self care demand

- It is the total self care actions performed for some duration in order to meet the self-care requisites by using valid methods.

The action directed towards the provision of self-care is the self care requisites which are of three categories, such as universal, developmental and health deviation.

Universal self care requisites

- The universal self care requisites are associated with the processes of lifeand maintenance of integrity of human structure such as activities of daily living, air, food, water, rest and activity, excrements, social interaction

In this study, the universal self care requisites are assessed through Modified Katz Index of Independence in activities of daily living assessment scale and Modified fantastic lifestyle questionnaire.

Developmental self care requisites

- The developmental self care requisites are those which are the new requisites from an associated event or a condition.

  In this study, the new requisite is the new lifestyle pattern that needs to be adopted after the associated event of myocardial infarction.

Health deviation self care requisites

The health deviation self care requisites are those that is required during illness, injury or disease which includes modifying the concepts and accepting himself

as being in a state of health and in specific forms of health care andlearning to live with the pathologic effects.

In this study, the health deviation self care requisites required after an attack includes modifying self-concepts and accepting self and learning to live with the effects after the initial heart attack, which is achieved through individualized education.

Self care deficit

- ✦ It is specified when nursing is needed, where a patient is not capable or limited in providing continuous effective self-care.

In this study, it refers to the patient's deficient knowledge on lifestyle modification after myocardial infarction.

Nursing action

- ✦ It refers to how the self care needs of patients are met by the nurse or by patient or both.

In this study the preferred nursing action is the supportive educative system.

Supportive educative system

It is through a situation the person is made fully capable of performing self care activities and requires help only in the areas of making decisions controlling behavior and gaining knowledge and skills

In this study, the supportive educative system comprises of the lifestyle modification after myocardial infarction which includes balanced nutrition, appropriate physical activity, adequate rest and sleep, safe sexual practices; also stress reduction, cessation of smoking and alcohol, management of diabetes and hypertension if present.

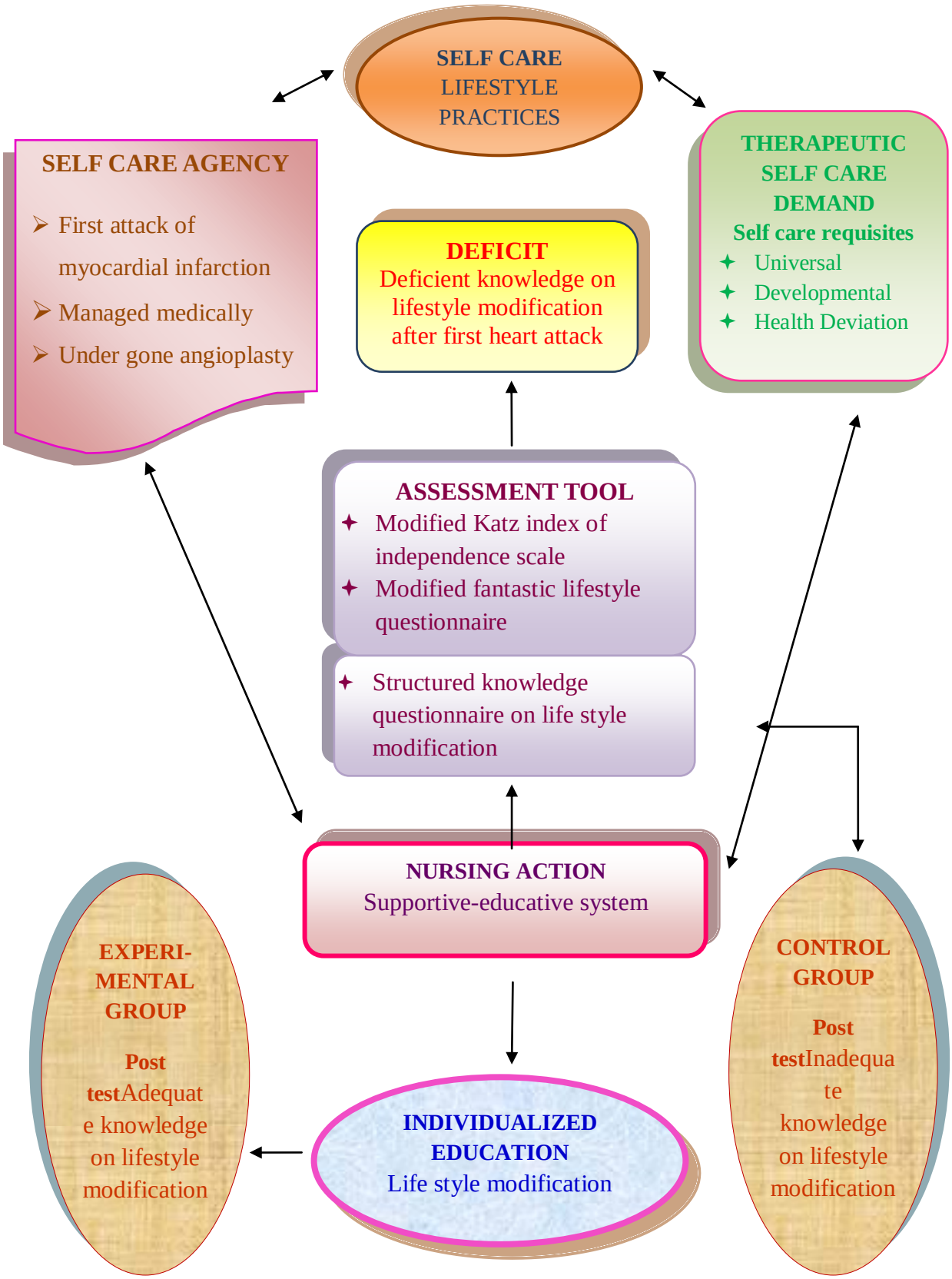


Fig.1.1-MODIFIED CONCEPTUAL FRAMEWORK BASED ON OREM'S GENERAL SYSTEM'S THEORY OF NURSING

CHAPTER - II

REVIEW OF LITERATURE

A literature review involves systemic identification, location, scrutiny and summary of written material that contain information on research problems.**(Polit&Beck,2003).**

The literature review of the present study is organized into the following headings:

Section A: Literature related to risk factors of myocardial infarction.

Section B: Literature related to lifestyle modification after myocardial infarction**.**

Section C: Literature related to effectiveness of education on lifestyle modification.

SECTION A: LITERATURE RELATED TO RISK FACTORS OF MYOCARDIAL INFARCTION.

Yusuf, et al., (2004) study identified nine risk factors for myocardial infarction. History of hypertension and diabetes; abnormal apolipoprotein levels; abdominal obesity, psychological factors, lack of daily consumption of fruits and vegetables, smoking, regular alcohol intake, and irregular physical activity had accounted for 90% of global cardiovascular diseases.

Naresh,R.Makwana., et al.,(2007),havereported in a study that a substantial proportion of Indian males and females had a prevalence of smoking habits. The young asymptomatic male smokers remained as carriers of hypertension and dyslipidaemia and made them prone for premature coronary artery disease. They also found a good number of Indian villagers addiction towards tobacco smoking and chewing of its related products.

According to **Ron, T. van Domburg., (2000)** it was observed that patients who continued to smoke after cardiac events had a greater risk of death than those who stopped smoking. They also underwent repeated revascularization procedures very frequently and thus smoking cessation was highly recommended after cardiac

events. They encouraged all clinicians to start or to continue smoking-cessation programs to help smokers to quit smoking and thereby reducing the cardiac events.

V. Mohan., et al., (2006) identified obesity as contributive risk factors for myocardial infarction and hypertension. It was observed that the body mass index was directly proportional to blood pressure. In another study, it was revealed that obesity was two times more prevalent among patients who underwent coronary artery bypass grafting or heart valve replacement surgeries in Victoria compared to the general adult population in Australia. Obesity was a leading cause of early morbidity but had not contributed to the higher mortality rates after operations.**Cheng-Hon Yap, et al., (2007)**

Stephen, J. Bunker., et al., (2003) found a strong evidence of an independent causal association between social isolation, depression and lack of social support leading to the poor prognosis of coronary heart disease. They alsoidentified physical inactivity as a major risk factor for coronary artery disease and diabetes among Indians. Excess consumption of junk food and fat rich diet were the contributing factors identified for the prevalence of diabetes and cardiovascular diseases.

Joshy, et al., (2006)in their interheart study done among south Asians found that there was no association between alcohol intake and myocardial infarction. Binge drinking or irregular ingestion of alcohol in huge quantities remained the commonest practice among south Asians.

T.N. Sugathan., et al.,(2008) study suggested an urgent need for adopting life style modifications to control risk behavior among young adults in Kerala. The observed behavioral risk factors such as tobacco smoking and alcohol consumption were called for urgent corrective steps and long-term monitoring.

BijuPoulose., et al., (2009)explained about the prevalence of high risk behavioramong males after heavy drinking with alcohol dependence syndrome. The severities of drinking and personality factors were strongly related. And it was observed that the high risk behavior occurred only after heavy alcohol consumption.

Leon AS., (2001) identified a strong relationship betweenhyperlipidemia and cardiovascular disease.Low body fat, cholesterol and low density lipoprotein cholesterol percentages were associated with reduced cardiovascular morbidity and mortality.

Alexander,Chernobelsky., et al.,(2007) have concluded that high density lipoprotein as a topic of concern to be targeted for present and future therapies for prevention of primary and secondary levels of coronary artery disease. They also identified that the low levels of high density lipoprotein cholesterol to be the independent risk factor for premature atherosclerosis.

Cook,N.R, et al.,(1998), found that the best available relationship between dietary sodium and blood pressure through the intersalt study. DASH–sodium study and the trials of hypertension prevention had demonstrated changes in blood pressure in response to dietary sodium reduction.

Mohan V, et al.,(2007), identified that the Chennai urban population who suffered from diabetes were also suffering from coronary artery disease. They found the mortality rates in cardiovascular disease and diabetics were around 53% in India.

Daniel, C.R. et al., (2011) conducted a cross-sectional investigation of regional patterns of diet and cardio metabolic risk in India in their India Health Study done among men and women aged 35-69.Cardio-metabolic risk factors were highly prevalent in the studied population across all regions. The dietary patterns were characterized by animal products, fried snacks, or sweets which reflected a positive association with abdominal adiposity. On the contrary, in Southern regions more traditional diets were inversely related to diabetes and hypertension.

Canto JG etal.,(2012) conducted an observational study and examined the relationship between age, sex, and hospital mortality and predictors of myocardial infarction without chest pain. They concluded that women were more likely to present without chest pain than men and had higher mortality than men within the same age group. Mortalitywas attenuated with increasing age.

Prakash C. Deedwania, etal., (2012) conducted a cross-sectional study to assess the association between socioeconomic,educational and occupational status with cardiovascular risk factors among Asian Indians. They concluded that the low educational, occupational and socioeconomic status in Asian Indians had a greater prevalence fortruncal obesity, low high density lipoprotein cholesterol, hypertriglyceridemia, tobacco use and low physical activity had remained as major risk factors for cardiovascular diseases.

Ali Janati,HosseinMatlabi., et al.,(2011) conducted a cross-sectional study at a central referral hospital among cardiac patients and associated the socioeconomic status and coronary heart disease. The study revealed that less educated participants had more susceptibility to coronary heart disease. Regarding the occupational status, housewives and retired men were at higher risk for coronary heart disease than the rest of the population. People from lower ormiddle social classes were in greater coronary heart disease risk than higher social classes. This epidemic might be halted through the promotion of healthier lifestyles and supportive changes.

Yurtdaş M, Aydın MK.,(2012) reported that marijuana could be one of the most probable cause of acute myocardial infarction observed in apparently healthy young persons who used this drug regularly.A cross sectional one year longitudinal cohort study was done among 569 men who had acute myocardial infarction or sudden cardiac death and wereidentified of opium dependence. The study proved that the addiction to opium decreases the age at myocardial infarction occurrence.**Roohafza H, TalaeiM.,et al.,(2013**)

Fioretti F, et al.,(2000) conducted a case-control study and reviewedliterature toanalyzethe relationship between menopause and non-fatal acute myocardial infarction in 429 women. They were below the age of 75 years with a first episode of non-fatal acute myocardial infarctionand reported that a moderate association between menopause and non-fatal acute myocardial infarction.

Y Liu and H Tanaka (2002)examined the relationship between working hours and hours of sleep and the risk of acute myocardial infarction. The results showed that the weekly working hours were related to progressively increased ratios of acute myocardial infarction, with a twofold increased risk for overtime work

compared with less working hours. Frequent lack of sleep andshort time sleep of less than five hours per day were also associated with a two to threefold increased risk. Thus, the study concluded that overtime work and lack of sleep was in relation to increased risk of acute myocardial infarction.

Janet M. Torpy.,(2007) stated the emotional and physical stresses with theassociated negative impact on the heart and the vascular system. Stress hormones damagesthe heart if exposed to elevated catecholamine's for a longer time. Stress causes increased oxygen demand on the body, spasm of the coronaryblood vessels, and electrical instability in the conduction system of the heart. Chronic stress increases the heart rate and blood pressure and makes the heart to work harder to produce the blood needed for bodily functions and leads to myocardial infarction.

SECTION-B: LITERATURE RELATED TO LIFESTYLE MODIFICATION AFTER MYOCARDIAL INFARCTION.

J.A. Iestra, et al.,(2005)have concluded that there was evidence from mortality studies in coronary artery disease patients that physical activity, smoking cessation, combined dietary changes and moderate alcohol consumption, had improved prognosis. Effect size estimated for the lifestyle goals varied between 20% and 35% mortality reductions. But data on the benefits of individual dietary goals were limited as per individuals. So it was recommended to have better-quality studies to reduce the uncertainty that surrounds these effect size estimates.

Daniel, E. Hilleman et al.,(2004) have identified that an aggressive smoking cessation intervention was associated with an increased smoking cessation rates as compared to a conservative treatment strategy among smokers.They also recommended for further study to confirm whether an early aggressive smoking cessation intervention would be essential.

According to the final version May 2007, National Collaborating Centre for Primary Care have concluded that all post myocardial infarction patients who were overweight or obese should be offered an advice and need to be supported to achieve and maintain a healthy weight within normal limits. **(NICE clinical guideline,2007)**

Blumenthal, et al.,(2004) have demonstrated the potential value of exercise in nonfatal reinfarction and reducing mortality among the myocardial infarction patients. Studies haveemphasized the importance of individual coping strategies and lifestyle changes within the work place environment and to enhance cardiovascular health promotion programs.

Franklin B, et al., (2004) have reported that regular exercise would produce anti-atherosclerotic, anti-thrombotic, psychological, anti-ischemic and anti-arrhythmic effects among the physically active individuals. Brief physical activity interventions such as verbal advice with supportive written materials had helped the individual to increase the physical activity participation.

Van't veer Pet al.(2000) have estimated an increased consumption of fruits and vegetables in association with reduced risk of cardiovascular deaths. Patients who drink alcohol should be advised to keep weekly consumption within safe limits and not to exceed more than 21 units per week in men and 14 units for women. Patients should be strictly advised to avoid binge drinking.

Increasing HDL cholesterol levels had improved cholesterol profiles and had helped to prevent angiographic progression of coronary stenosis, and thereby prevented cardiovascular events in some people who exercised regularly and consumed low-fat diets. **Edwin J Whitney et al.,(2005)**

Paul D. Thompsonet al.,(2009)have concluded that regular physical activity had shown to improve lipid and glucose metabolism by increasing serum high density lipoprotein cholesterol and insulin sensitivity and decreasing triglycerides and serum low density lipoprotein cholesterol levels.

American college of sports medicine gave a report that physical activity has reduced high blood pressure in those people with hypertension. The systolic and diastolic readings had declined approximately between 5 to 7 mm of Hg, aftersuch physical activities.

Nancy R Cook et al., (2007) reportedsodium reduction in lowering blood pressure and hypertension, thereby preventing cardiovascular disease. The trials of hypertension prevention interventions reduced sodium intake by about 25% to 35%.

The observed reduction in cardiovascular risk associated with sodium decrease was substantial. This provides a strong support for population-wide reduction in sodium intake to prevent the risk of cardiovascular disease.

Rastogi T,et al.,(2004) addressed the association between diet and ischemic heart disease risk among north and south Indians. They observed the inverse association between high sources of vegetable intake and ischemic heart disease risks. Persons who consumed 3.5 servings per week had a 67% lower relative risk than those who consumed 0.5 servings per week. Cereal intake and mustard oil use, which is rich in alpha-linolenic acid, were associated with a lower riskthan the sunflower oil consumption.

Penny M. Kris-Etherton., et al., (2003) According to the American heart association statement, omega-3 fatty acids had been shown to reduce the incidence of cardiovascular diseases by reducing low density lipoprotein levels. The consumption of plant and marine derived omega-3 fatty acids significantly reduced all-cause mortality and cardiac events such as nonfatal myocardial infarction. Inclusion of at least two servings of fish per week particularly fatty fish, and also food sources and vegetable oils of flaxseed, canola, soybean, walnuts which were high inα-linolenic acid in a healthy diet promotes health benefits for both primary and secondary prevention.

Aparnakuna, Poshadri.A ., (2013) stated aboutphytoesterols which is also known as plant sterols, found in whole grains, plant oils such as rice bran oil, corn oil, dried fruits such as cashew nuts and almonds ,pulses, fruits and vegetables can cause significant reduction in low density lipoprotein levels.

Steinke EE,Patterson-Midgley P., (1998)studied the importance of sexual counseling after myocardial infarction. Patients validated the importance of each of the specific areas for sexual counseling after myocardial infarction. If sexual counseling is initiated in the acute-care setting and continued throughout the recovery period it could impact the quality of life of patients with myocardial infarction and their life partner.

Riegel B, Gocka I.,(1995) conducted a survey on gender differences in adjustment after myocardial infarction. The result showed that women experienced

improved perceptions of current health and their overall emotional distress, anxiety, and depressionsweredecreased significantly over time. Women reported wanting, receiving, and giving more support than men did at one month and receiving and giving more support than men did at four months, although stress in support relationships raised over time. In men anxiety, depression, and health concernswere decreased significantly over time, but their ratings of prior health kept increasing. The match between social supports wanted and received decreased over time in males due to their satisfaction with the support received. No difference was noted about the return to work at four months in both genders.

SECTION-C: LITERATURE RELATED TO EFFECTIVENESS OF EDUCATION ON LIFESTYLE MODIFICATION

Duryée R(1992) conducted a literature review on the efficacy of inpatient education post myocardial infarction to determine which information patients identified as most important. Whether inpatient education increased patients' knowledge or anxiety prevented their learning capabilities along with the preferred teaching method. The primary concern of patients' were on risk factors. Majority of studies reportedthat in spite of the presence of anxiety, patients' were able to learn new information particularly about the activities following discharge. Lifestyle changes post discharge was stimulated through inpatient education, predominantly in the areas of smoking cessationandactivity. Various methods of teaching were compared, and the audiovisual method was found to be effective as much as one-to-one patient teaching.

Hanssen TA, Nordrehaug JE, Hanestad BR.,(2005) conducted a study on the information needs and their preference for follow up after discharge among the myocardial infarction patients. The findings were grouped into three themes corresponding to the major topics in the interview guide. They were about the hospital stay, coming home, and patients' follow-up preferences. Majority of patients highlighted the follow-up preferences through open telephone lines and telephone follow-up. The results of this study provided some of the knowledge essential to improve patient information and support after the attack of myocardial infarction.

Carlsson R.,(1998) conducted a study about the quality of life of patients with coronary artery disease. The intervention programme was most successful in affecting lipid levels and food habits in post myocardial infarction patients. Quality of life was considerably affected in patients after a cardiac event, especially during the initial recovery phase. In addition, patients receiving thrombolytic therapy, the cholesterol levels were estimated after four weeks of anacute myocardial infarctionwhich were reasonably valid estimates of baseline values. This helped to decide about lipid lowering interventions.

Stewart DE, Abbey SE etal., (2004) analyzed about the gender differences in health information needs and decisional preferences in patients recovering from an acute ischemic coronary event. The results showed that men reported significantly more information received and greater satisfaction with healthcare practitioners and wanted more information about sexual function, and about the role of each doctor, the test results, treatments, cardiac rehabilitation, and how their families could support their lifestyle changes. Women wanted more information than men concerning angina and hypertension. Patients who reported receiving more information had less depressive symptomatology, greater self-efficacy, healthcare satisfaction, and preventive health behaviors. Also, most patients of both sexes preferred a shared decision-making role with their physician.

Oterhals K, HanestadBR,et al.,(2006) studied the relationship between in-hospital information and patient satisfaction after acute myocardial infarction and described areas for improvement of patients' health care.The results showed that the more information the patient received, the more they were satisfied with the hospital stay. The results indicated the necessity to examine the provision of in-hospital information and education to acute myocardial infarction patients. Patients wanted more information about the follow up care discharge and after returning home.

Bellman C, (2009) conducted a study on the achievement of secondary preventive goals after acute myocardial infarction between participants and non participants in a routine patient education program in Sweden. The result showed that patients who participated in the heart school stopped smoking more often than those who did not attend any educational program.

Vest foldHeart care Study Group (2003)studied the influence of lifestyle changes and a five-year coronary risk using a comprehensive lifestyle intervention programme among patients with coronary heart disease.The results showed that patients in the lifestyle intervention group had reduced the intake of saturated fat, cholesterol andsugar,increased their exercise level and stopped smoking when compared with the usual care group with a relative risk reduction of 22%.This reveals that along with modern drug treatments for secondary cardiovascular disease prevention an added regimen of diet control, moderate exercise and smoking cessationwill have an additional reduction in the five-year risk for coronary heart disease.

Steinke EE, Swan JH.,(2004) studied the effectiveness of a videotape assisted sexual counseling after myocardial infarction. It was reported that patients who received both written instructions and a videotape to view at home had greater knowledge, better quality of life, less anxiety, greater sexual satisfaction, and resumed sexual activity more quickly than those who received written instructions alone. The study concluded that the videotape intervention provided an alternative method for education to facilitate recovery in post-myocardial infarction period.

Li S, ChiuveSE(2013) examined the association of post-myocardial infarction dietary quality and changes from pre- to post- myocardial infarction with all-cause and cardiovascular mortality among myocardial infarction survivors. The study concluded that the survivors who consumeda higher-quality diet, which had been associated with a lower risk of coronary heart disease in primary prevention, also had lower subsequent all-cause mortality.

Buckley T, McKinley S.,etal.,(2007), studied the effect of education and counseling on knowledge, attitudes and beliefs about responses to acute myocardial infarction symptoms in a randomized controlled trial of 200 people. The study concluded that a short individual teaching and counseling intervention resulted in improved knowledge of coronary heart disease and acute myocardial infarction symptoms.

Bagheri H, Memarian R, Alhani F (2007) carried out a randomized-controlled trial to investigate the effect of group counseling programme on the quality

of life among survivors of myocardial infarction. The results indicated that patient's quality of life in all dimensions was promoted through group counseling programme. In a wide variety of settings ranging from intensive care to community,group counseling programneed to be applied by nurses, as a safeand simple intervention to improve patient's quality of life.

Lindberg G, Westin L, et al.,(1997) conducted an interventional study to recognize the influence of coronary nursing management follow up on the lifestyle after acute myocardial infarction. And it was observed that the nurse rehabilitator was successful in improving 89% of the patient's food habits post acute myocardial infarction. Also, initiating smoking cessation programme during thestay in hospital with repetitive counseling during the follow up had showed improved results in 50% of the smokers.

Vincent.K.F. Mok, .et al (2013) studied the effectiveness of nurse follow-up dietary intervention among 82 post myocardial infarction patients' dietary behavioral changes and blood lipid levels which was evaluated using self-reported questionnaire and blood tests.The study found that there were positive changes in dietary behavior and an increase in high density lipoprotein levels.

Nancy Houston-Miller,et.al.,(1990)studied the effects of a nurse-managed intervention on smoking cessation after acute myocardial infarction. One year after myocardial infarction, the smoking cessation rate showed a 29% difference between the intervention and control group. Those patients whoeither expressed little intention of stopping in the hospital or resumed smoking within 3 weeks after infarction were unlikely to stop by 12 months. Thus, the study concluded that the nurse-managed smoking cessation intervention mostly started in the hospital, conducted by telephone and focused on relapse prevention had significant reduction in the smoking rates at 12 months among patients who had a myocardial infarction.

Uysal H, Ozcan S., **(2013)**analyzed the effect of individual education on the patients' physical activity capacity post myocardial infarction. The sample comprised of 90 myocardial infarction patients who had their attack for the first time. In comparison with the control group,in the intervention group more improvement was observed in terms of body mass index,waist circumference and frequency of physical

activity. It was also observed that the intervention six minute walk test distance and group's metabolic equivalent of task values increased significantly in comparison with the control group. The results proved that individual education and counseling provided to patients could increase functional capacity. They should be advised about tweightmanagement and need to be motivated to improve compliance with treatment through physical activity behaviors**.**

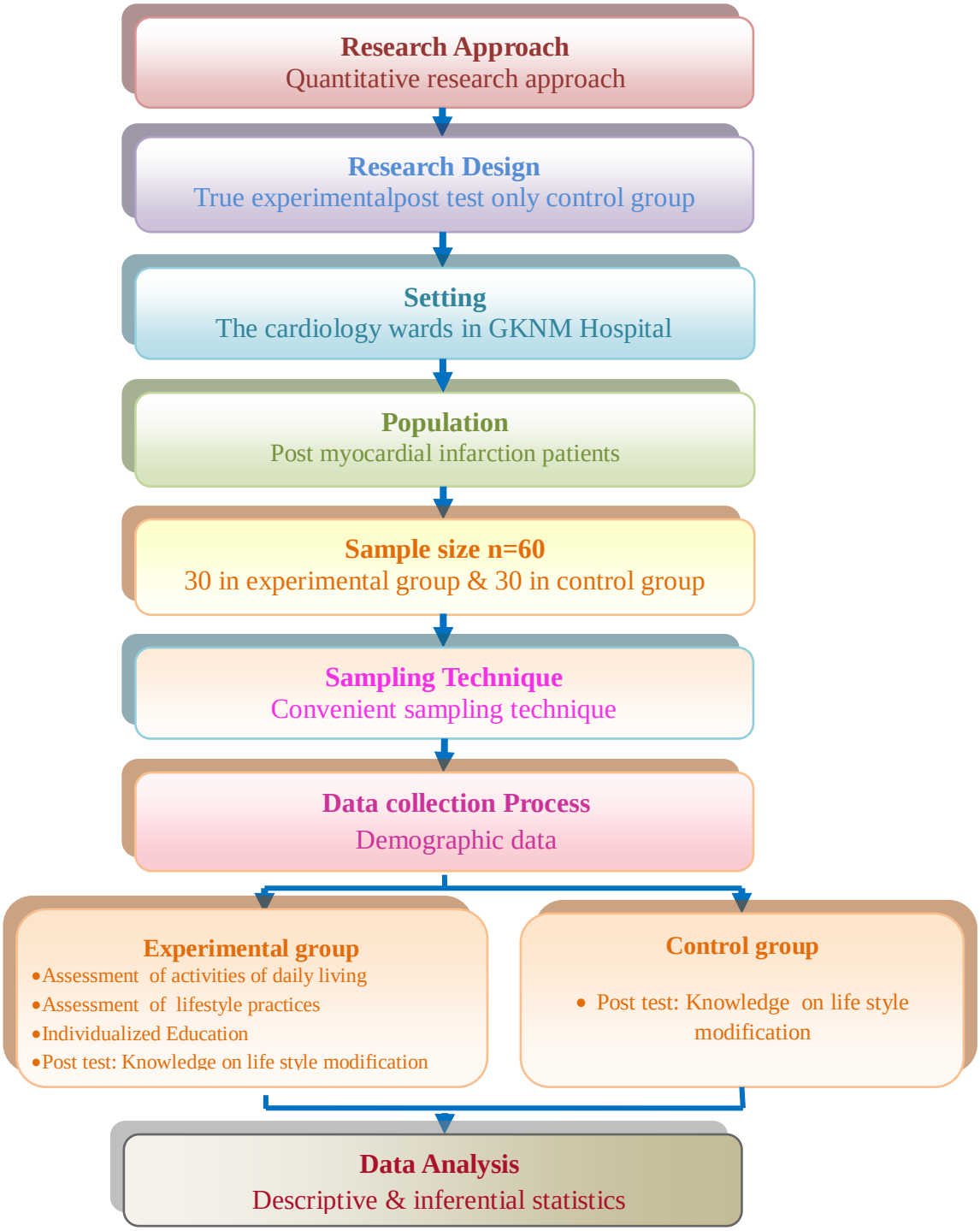
Hye-Sun Jeong,Jang-SeongChae et al.,(2002), conducted a study to evaluate the effect of an individualized teaching program for atherosclerotic risk factor reduction in patients with myocardial infarction. The topics comprised of which included anatomy and physiology of heart, medications, diet ,exercise therapy and atherosclerotic risk factors such as smoking, exercise, blood lipid profile and body mass index. The subjects were provided teaching and received regular follow up and supportive care via telephone or mail. Post-test results on experimental group revealed that the number of non-smokers, who exercised , had significantly higher high density lipoprotein cholesterol levels. This reveals that the individualized teaching program was helpful in reducing the riskfactors of atherosclerosis.

CHAPTER-III

METHODOLOGY

Research methodology is a systematic way to solve the research problem. **Pearson (1992)** stated that there is no shortcut to truth. There is no way to gain knowledge of the universe except through the gateway of scientific method. Methodology is one which enables the researcher to project a blue print of the research undertaken.

FIGURE: 3.1-SCHEMATIC REPRESENTATION OF RESEARCH METHODOLOGY



RESEARCH APPROACH

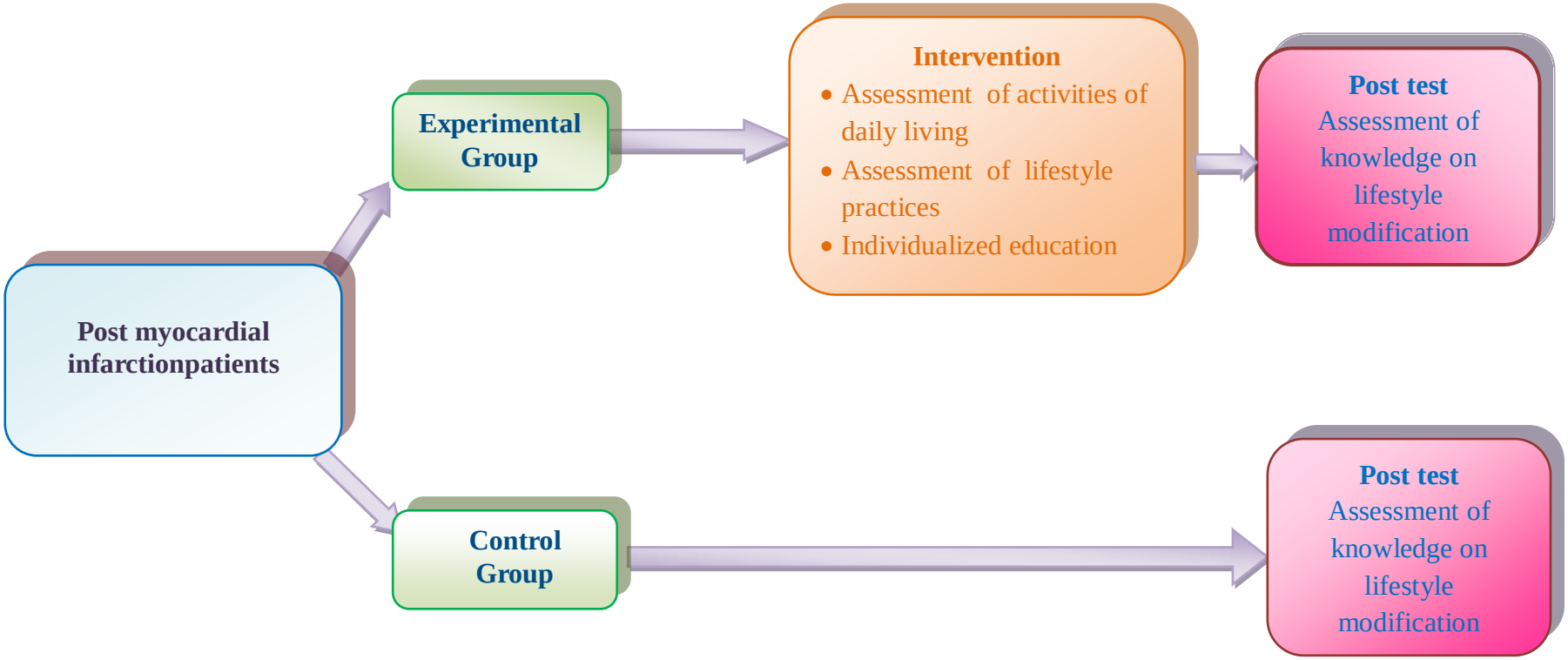
- Quantitative research approach was selected to assess the effectiveness of individualized education on lifestyle modification among post myocardial infarction patients

RESEARCH DESIGN

The research design provides an overall plan for conducting the study. True experimental, posttest only control group design was selected for this study.

The experimental group was assessed for their readiness to learnthrough activities of daily living scale and the lifestyle practice was assessed through the lifestyle questionnaire to educate them accordingly. Individualized education was given to the experimental group. Post-test was done to assess the effectiveness of educationamong the experimental and control groups.

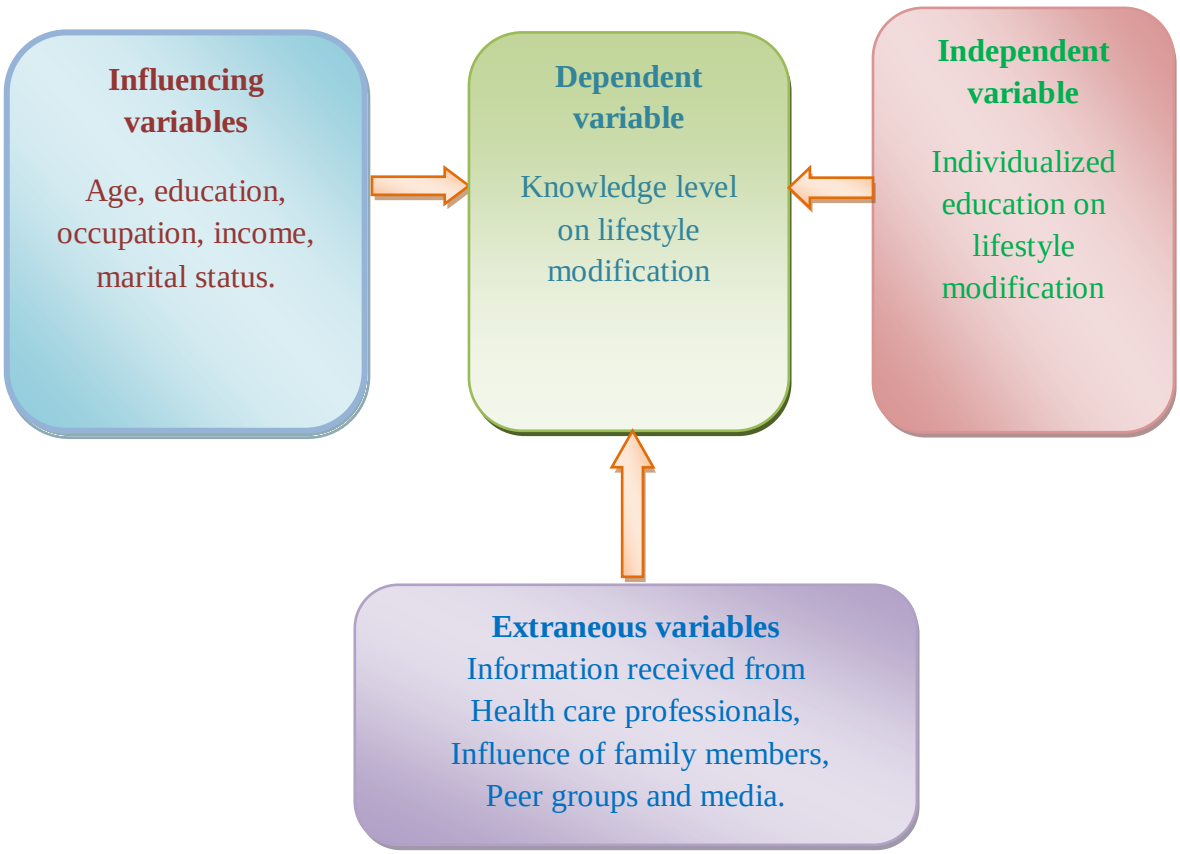
FIGURE: 3.2 - SCHEMATIC REPRESENTATION OF RESEARCH DESIGN



VARIABLES

- **Influencing variable**: Age, education, occupation, income ,marital status.
- **Independent variable:** Individualized education on lifestyle modification
- **Dependent variable**: Knowledge level on lifestyle modification among post myocardial infarction patients
- **Extraneous variables**: Information received from health care professionals, influence of family members, peer groups and media.

FIQURE 3.3- SCHEMATIC REPRESENTATION OF VARIABLES



SETTING OF THE STUDY

The study was conducted in the cardiac wards (i.e., ward 10, 14 & 15) of G. Kuppuswamy Naidu Memorial Hospital, which is a super speciality tertiary care centre in Coimbatore.

POPULATION

- It comprised of all post myocardial infarction patients who fulfilled the inclusion criteria.

SAMPLE SIZE

The sample size was determined, using **Mahajan's** formula

Sample size (n) = $\frac{4Pq}{L^2}$

P = Percentage of population	P =(274/3515) × 100 = 7.79
q = 100 – P	q = 100- 7.79 = 92.2
L= Allowable error	L=7

$$n = \frac{4Pq}{L^2} = (4 \times 7.79 \times 92.2)/ 49 = 58.6$$

According to this sample size, it was decided to select 60 samples.

SAMPLING TECHNIQUE

Non-probability convenient sampling technique was adopted for the study. Patients were assigned to experimental and control group based on convenience sampling technique

SAMPLING CRITERIA

Inclusion Criteria

- Myocardialinfarction patients who had their heart attack for the first time.
- Myocardialinfarction patients who were treated medically or underwent angioplasty.

Exclusion Criteria

- Myocardialinfarction patients who were advised for coronary artery bypass graft.
- Myocardialinfarction patients who were haemodynamically unstable

DESCRIPTION OF THE TOOL

- ☞ The data collection tool consisted of four sections.

Section A- Structured interview questionnaire on demographic data

It consist of the demographic variables of the subjects which includes age, sex, educational status, occupation, religion, monthly income, marital status, type of family, family history and any other disease history.

Section-B – Activities of daily living assessment scale

It is a Modified Katz Index of Independence Scale of Activities of daily living which consists of assessment of six activities namely bathing, dressing, toileting, mobility, continence and feeding. Each activity is categorized into three scales namely independent, interdependent and dependent and is given 2, 1, 0 scores respectively. Activities of daily living were used to assess the readiness to learn after the myocardial infarction. The activities of daily living score was interpretedas follows:

Independent (High) : 7-12

Interdependent (Moderate) : 1-6

Dependent (Low) : 0

Section C- Lifestyle questionnaire

It is a modified fantastic lifestyle questionnaire which includes family and friends, activity, nutrition, tobacco and toxins, alcohol, stress, safe sex, type of behavior, insight and career. It totally consists of 25 questions and each question carries 0-4 scores based each individual's practice. The total scoring is 100. Score ranged from 85-100 is considered as an excellent heart healthy lifestyle which has the appropriate activity, nutrition, stress ,without tobacco and alcohol ,which will prevent further re-infarction and help to lead a healthy life after myocardial infarction.

The lifestyle score was interpreted as follows:

Poor :	0-34
Fair :	35-54
Good :	55-69
Very good:	70-84
Excellent :	85-100

Section D – Structured knowledge questionnaire

It was developed by the investigator to assess the knowledge on lifestyle modification among post myocardial infarction patients. It consists of 25 questions related to lifestyle modification after myocardial infarction. Each correct answer was given a score of one and the wrong answer was given a score of zero.The maximum score was 25.The questions were classified as follows:

- Related to myocardial infarction
  - Physiology of heart and coronary arteries
  - Pathophysiology of myocardial infarction
  - Risk factors of myocardial infarction
- Lifestyle modifications related to
  - Diet
  - Exercise
  - Sleep
  - Sexual health
  - Stress
  - Smoking cessation

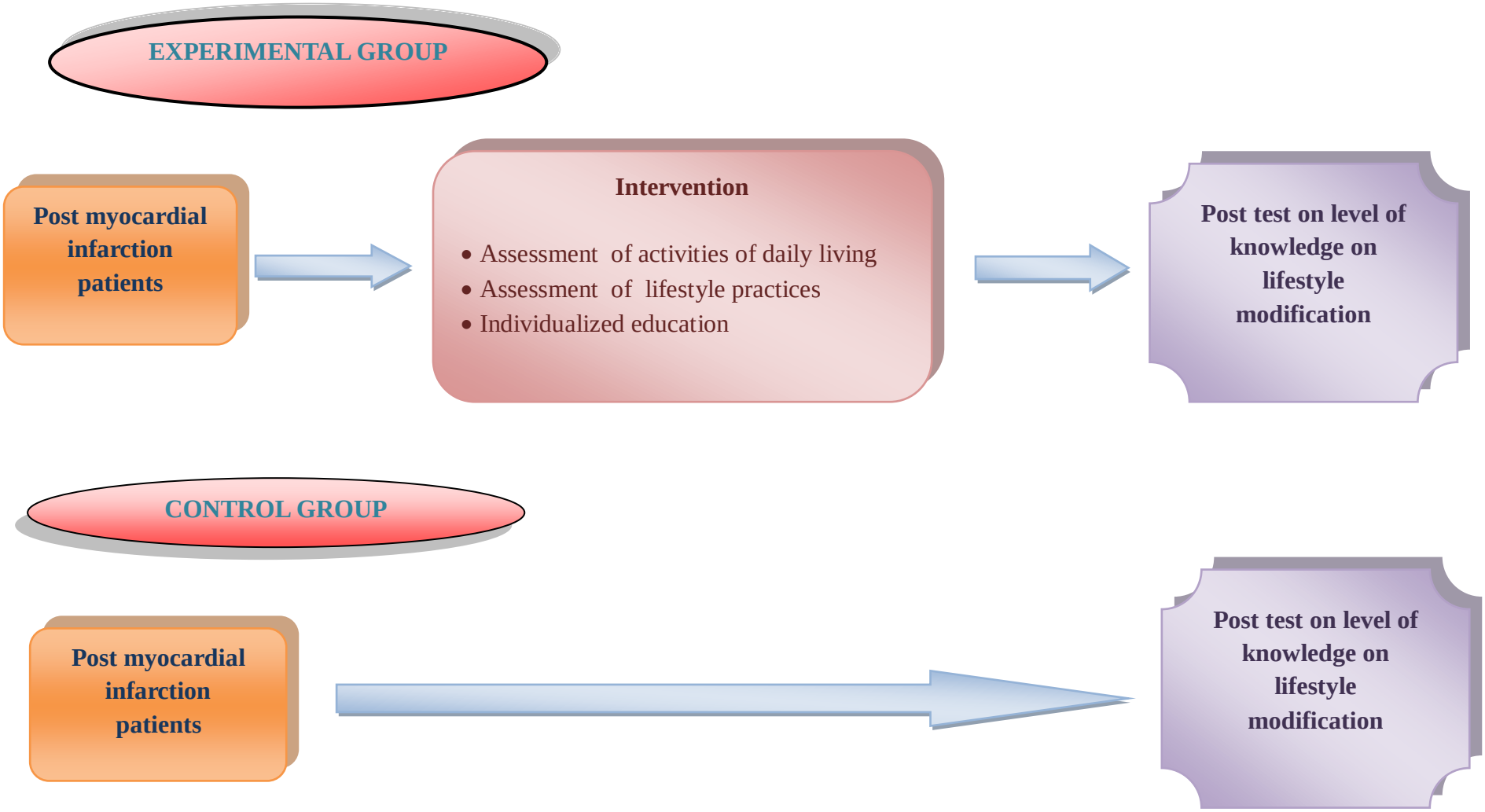
The knowledge score was interpreted as follows

Inadequate knowledge (0-11)	:	<50%
Moderate knowledge (12-18)	:	50-75%
Adequate knowledge (19-25)	:	>75%

DESCRIPTION OF THE INTERVENTION

Initially, demographic data was collected in both groups. Further, in the experimental group, the activities of daily living were assessed to know their readiness to learn and also assessed their lifestyle practices. Based on these practices, individualized education was given on the lifestyle modification after myocardial infarction. Patients were followed up on the following day. Post testwas done using structured knowledge questionnaire among experimental and group.

FIGURE: 3.4–SCHEMATIC REPRESENTATION OF INTERVENTION



VALIDITY

The tool for the study was submitted for the validation to experts in the field of cardiology and physiotherapy in G. Kuppuswamy Naidu Memorial Hospital, in the department of medical surgical nursing in GKNM Institute of nursing and nursing experts from other nursing institutes in and around Coimbatore. The translated Tamil version was validated by Tamil expert. Based on the suggestions and recommendations the tool was finalized for the main study.

RELIABILITY

Reliability of the research instrument is defined as the extent to which the instrument yields the same results on repeated measures. It is then concerned with consistency, accuracy, precision, stability, equivalence and homogeneity (**Kothari CR., 1996).**

- The reliability of the tool was determined by the Spearman Brown's Split-Half technique. r'(coefficient of correlation)value was 0.89 with r' (coefficient of reliabily) value 0.94
- Reliability was computed by following equation,

$$r = \frac{\Sigma (X- \bar{X}) (Y- \bar{Y})}{\sqrt{\Sigma(X- \bar{X})^2.\Sigma (Y- \bar{Y})^2}}$$

$$r' = \frac{2r}{1+r}$$

ETHICAL CONSENT

The consent to conduct the study was obtained from the ethical committee of G.Kuppusamy Naidu Memorial Hospital,Coimbatore .

PILOT STUDY

Pilot study was conducted in cardiac wards of G. Kuppuswamy Naidu Memorial Hospital, Coimbatore for the period of two weeks from 15.7.13 to 26.7.13.10. Samples were distributed to experimental group and control group using convenient sampling technique. The data was collected by usingstructured interview

questionnaire on demographic data, activities of daily living assessment scale, lifestyle questionnaire, and structured knowledge questionnaire. Upon the completion of pilot study the feasibility and practicability of the tool was assessed. Based on the pilot study results necessary changes were made to the tool.

DATA COLLECTION PROCEDURE

The data collection period was for four weeks.Data were collected every day during data collection period from 29.7.2013 to 24.8.2013 in cardiac wards from 8 am to 4 pm, among post myocardial infarction patients. Sample selected were given self-introduction and an oral consent was obtained. The participants were assured about the confidentiality of the data collected and that it will be used only for research purpose. The demographic data were collected by using structured interview questionnaire. The activities of daily living, lifestyle practices of each patient were assessed and individualized education was provided to the experimental group. Post-test was carried out in both the groups.

PLAN FOR DATA ANALYSIS

Descriptive and Inferential statistics used to analyze the data

- The data collected from subjects were compiled and analyzed using descriptive statistics such as frequency, mean, percentage and standard deviation.
- To test the effectiveness of the individualized education in the experimental and control group‘ t’ -test for two means was used.
- Chi-square test was used to assess the association between lifestyle practices and selected demographic variables.

CHAPTER-IV

ANALYSIS AND INTERPRETATION

Analysis is defined as the process of systematically applying statistical and logical techniques to describe, summarize and compare data.–**Suresh K.Sharma (2011).**

This chapter deals with the analysis and interpretation of data collected from 60 post myocardial infarction patients and assessed the effectiveness of individualized education on lifestyle modification. The study findings were based on the descriptive and inferential statistics and the data's analyzed were tabulated, organized and interpreted as follows:

Table 4.1: Distribution of demographic variables ofpost myocardial infarctionpatients.

Table 4.2: Distribution of activities of daily living according to the level of independence of the experimental group.

Table 4.3: Distribution of lifestyle practices of the experimental group.

Table4.4: Distribution of levelof knowledge on lifestyle modification in experimental and control group.

Table 4.5: Comparison of the levels of knowledge onlifestyle modification in the experimental and control group.

Table 4.6: Association of lifestyle practices with selected demographic variables.

TABLE - 4.1

DISTRIBUTION OF DEMOGRAPHIC VARIABLES OF POST MYOCARDIAL INFARCTION PATIENTS

n= 60

S No.	Demographic data	Experimental Group		Control Group	
		Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
1	**Age in years**				
	a) 30-39	4	13.3	2	6.7
	b) 40-49	10	33.3	7	23.3
	c) 50-59	7	23.3	8	26.7
	d) > 60	9	30.0	13	43.3
2	**Sex**				
	a) Male	26	86.7	26	86.7
	b) Female	4	13.3	4	13.3
3	**Education**				
	a) Illiterate	2	6.7	3	10.0
	b) School level	26	86.7	22	73.3
	c) Undergraduate	2	6.6	5	16.7
	d) Postgraduate	0	0	0	0
4	**Occupation**				
	a) Unemployed	3	10.0	7	23.3
	b) Self-employed	18	60.0	12	40.0
	c) Government employee	2	6.7	8	26.7
	d) Private employee	7	23.3	3	10.0
5	**Religion**				
	a) Hindu	25	83.33	29	96.7
	b) Christian	3	10	0	0
	c) Muslim	2	6.67	1	3.3
	d) Others	0	0	0	0

6	**Marital Status**				
	a) Single	1	3.33	2	6.67
	b) Married	28	93.34	24	80
	c) Widowed	1	3.33	4	13.33
	d) Divorced	0	0	0	0
7	**Type of Family**				
	a) Nuclear	24	80	20	66.67
	b) Joint	6	20	10	33.33
8	**Monthly Income**				
	a) <10,000	23	76.8	18	60
	b) Rs. 10,001 – 20,000	5	16.7	10	33.33
	c) Rs. 20,001 – 30,000	1	3.3	2	6.67
	d) Above Rs. 30,001	1	3.3	0	0
9	**Family history**				
	a) Present	10	33.3	6	20
	b) Absent	20	66.7	24	80
10.	**Disease history**				
	a) Hypertension	3	10.0	4	13.33
	b) Diabetes	5	16.7	7	23.33
	c) Diabetes & hypertension	1	3.3	7	23.34
	d) Others	2	6.66	0	0
	e) None	19	63.34	12	40

Table 4.1 reveals the distribution of demographic variables. The details are as follows:

Age: It reveals that in the experimental group 33.33% of them were between the age group 40-49 years and in the control group43.33% of them were above the age group >60 years.

Sex: In the experimental group and in control group 26 (86.67%) patients belonged to the male gender.

Educational status: In the experimental group 86.67% and in control group73.33%of them had school level of education.

Occupational status:60 % of them inthe experimental group and 40 % of them control group were self-employed.

Religion: In the experimental group 83.33% and in control group 96.67 % were Hindus.

Marital status: 93.33% in the experimental group and 80% in control group were married.

Type of family: In the experimental group 80% and in control group 66.67% belonged to nuclear family

Monthly income: Inthe experimental group 80% of them and in the control group 60% of them had an income of less than Rs. 10,000 per month

Family history: In the experimental group 66.67% of them and in control group 80% of them had no family history of myocardial infarction.

Disease history: In the experimental group, regarding the disease history 63.34% had no diseases, whereas 16.67% had diabetes, 3.3% had both diabetes and hypertension and the remaining 6.66% had other diseases and in control group the disease history 40% had no illnesses, but 23.34% were suffering from diabetes and 23.34% had both diabetes and hypertension.

FIGURE – 4.1 DISTRIBUTION OF POST MYOCARDIAL INFARCTION PATIENTS ACCORDING TO AGE

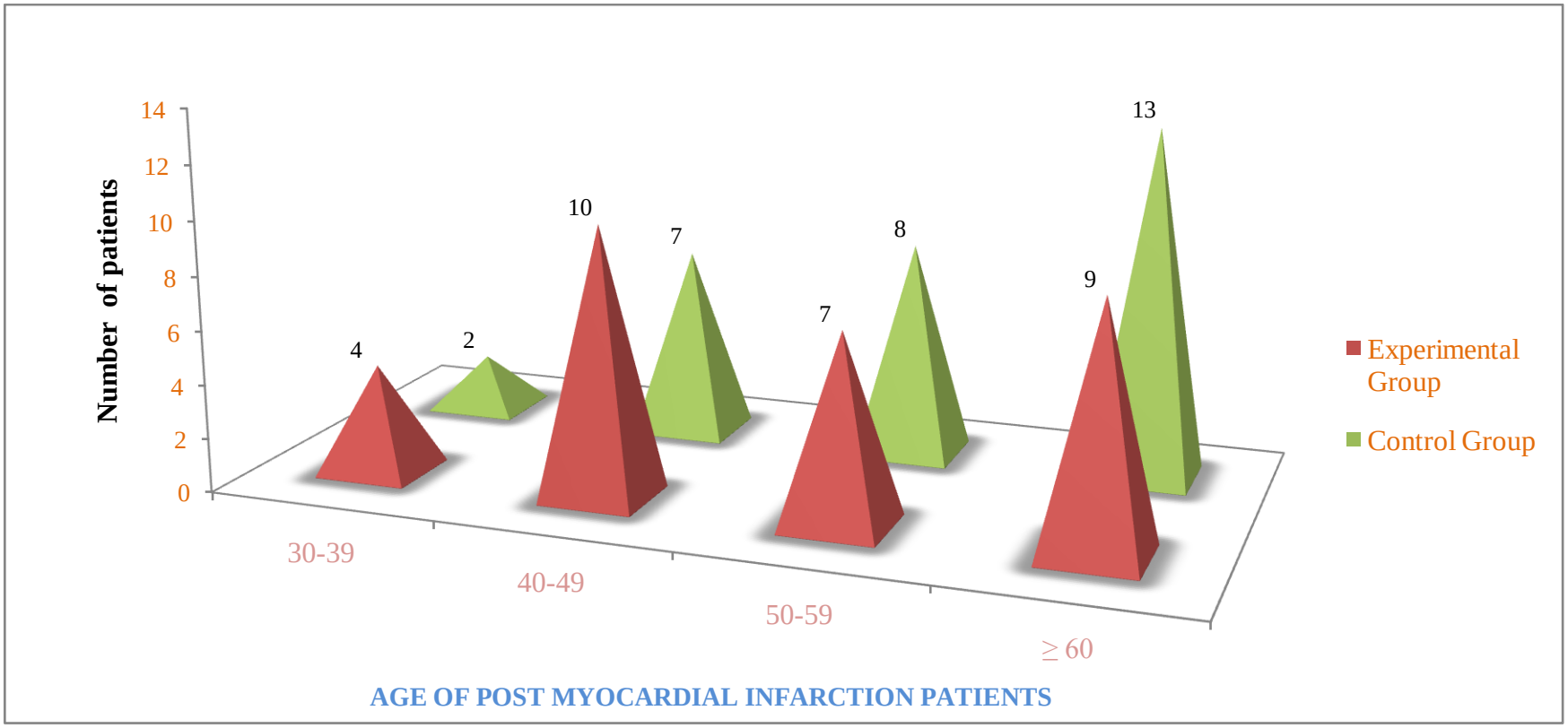


FIGURE – 4.2 DISTRIBUTION OF POST MYOCARDAIL INFARCTION PATIENTS ACCORDING TO OCCUPATION

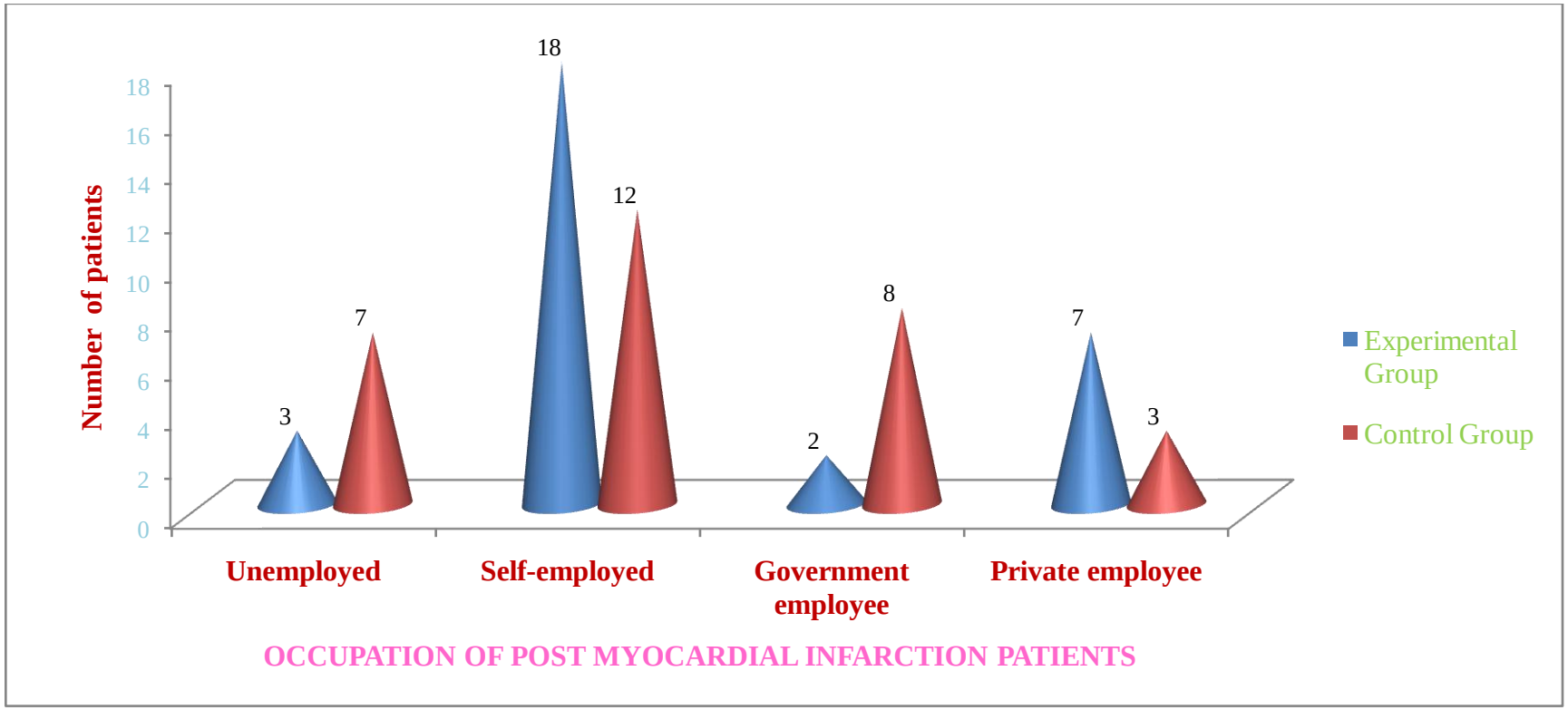


FIGURE – 4.3 DISTRIBUTION OF FAMILY HISTORY AMONG POST MYOCARDIAL INFARCTION PATIENTS

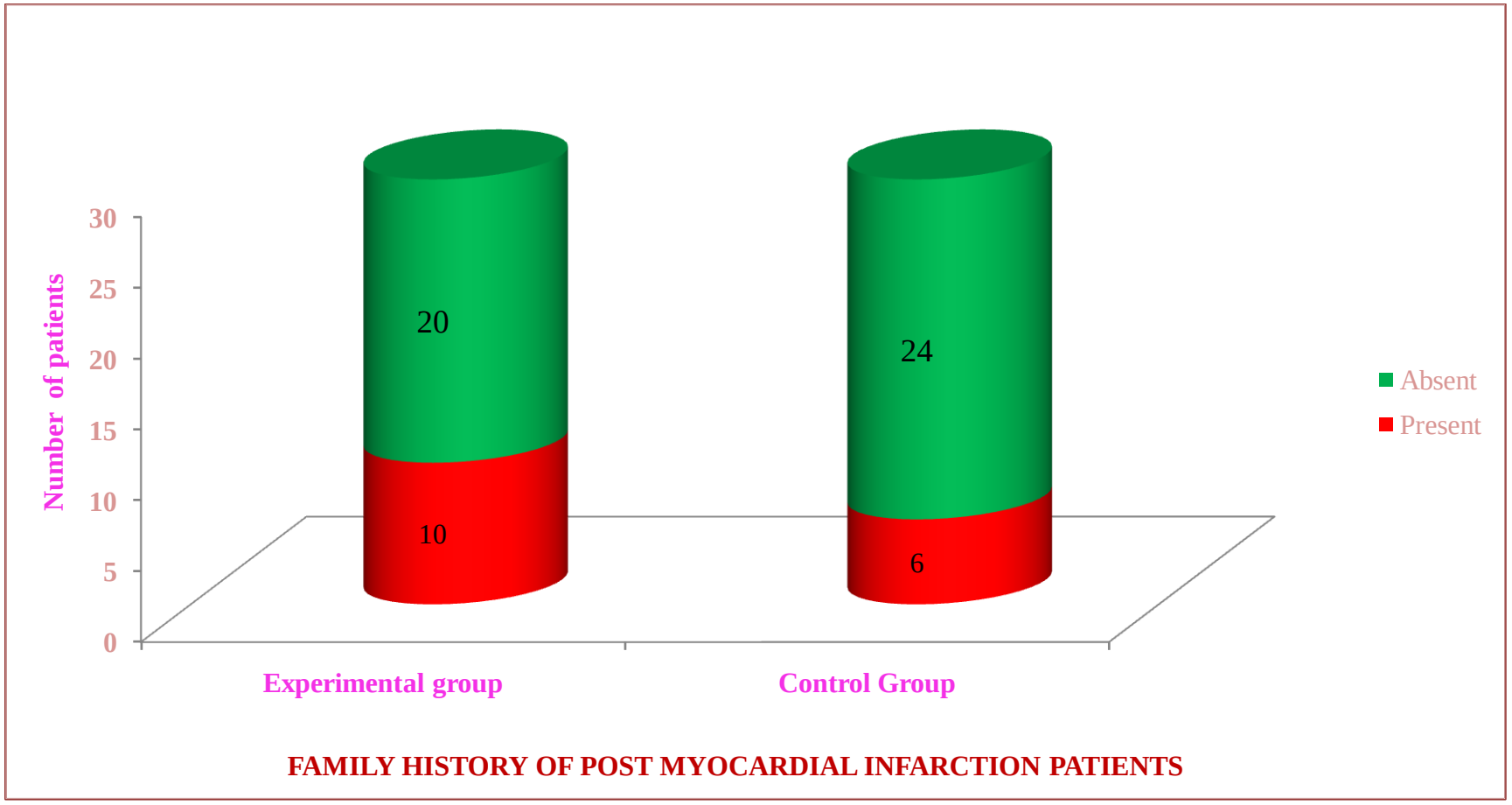


TABLE - 4.2

DISTRIBUTION OF ACTIVITIES OF DAILY LIVING ACCORDING TO THE LEVEL OF INDEPENDENCE IN THE EXPERIMENTAL GROUP.

n= 30

Sl. no	Level of Independence	Scoring	Experimental group			
			Frequency (f)	Percentage (%)	Mean	SD
1	Independent	7-12	29	96.67	11.76	1.09
2	Interdependent	1-6	1	3.33		
3	Dependent	0	0	0		

Table 4.2 shows that out of 30 subjects, 29(96.67 %) were independent and only 3.33% were interdependent in carrying out their activities of daily living. This reveals that maximum number of patients were ready for education prior to intervention.

FIGURE 4.4 DISTRIBUTION OF ACTIVITIES OF DAILY LIVING ACCORDING TO THE LEVEL OF INDEPENDENCE IN THE EXPERIMENTAL GROUP

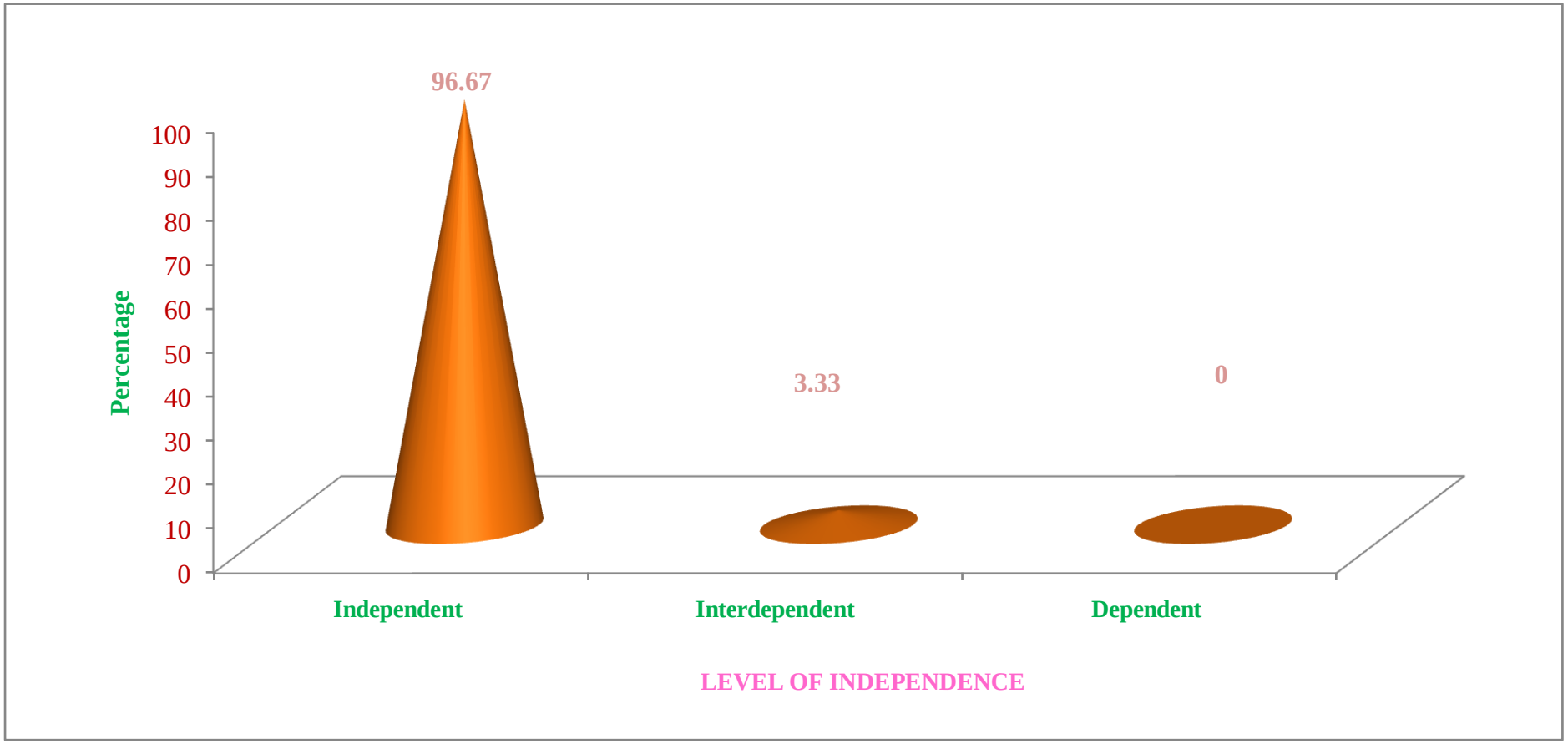


TABLE - 4.3

DISTRIBUTION OF LIFESTYLE PRACTICES OF THE EXPERIMENTAL GROUP

n= 30

Lifestyle practices	**Scoring**	**f**	**%**	**Mean**	**SD**
Poor	0-34	0	0	62.3	9.67
Fair	35-54	5	16.67		
Good	55-69	20	66.66		
Very Good	70-84	5	16.67		
Excellent	85-100	0	0		

Table 4.3shows that out of the 30 samples, 20(66.66%) of them had good practice and 5(16.67%) had either fair or a very good lifestyle practices and none of them had an excellent lifestyle. This reveals, the essentiality of providing education to modify the lifestyle practices, in order to follow an excellent lifestyle.

FIGURE- 4.5 DISTRIBUTION OF LIFESTYLE PRACTICES OF THE EXPERIMENTAL GROUP

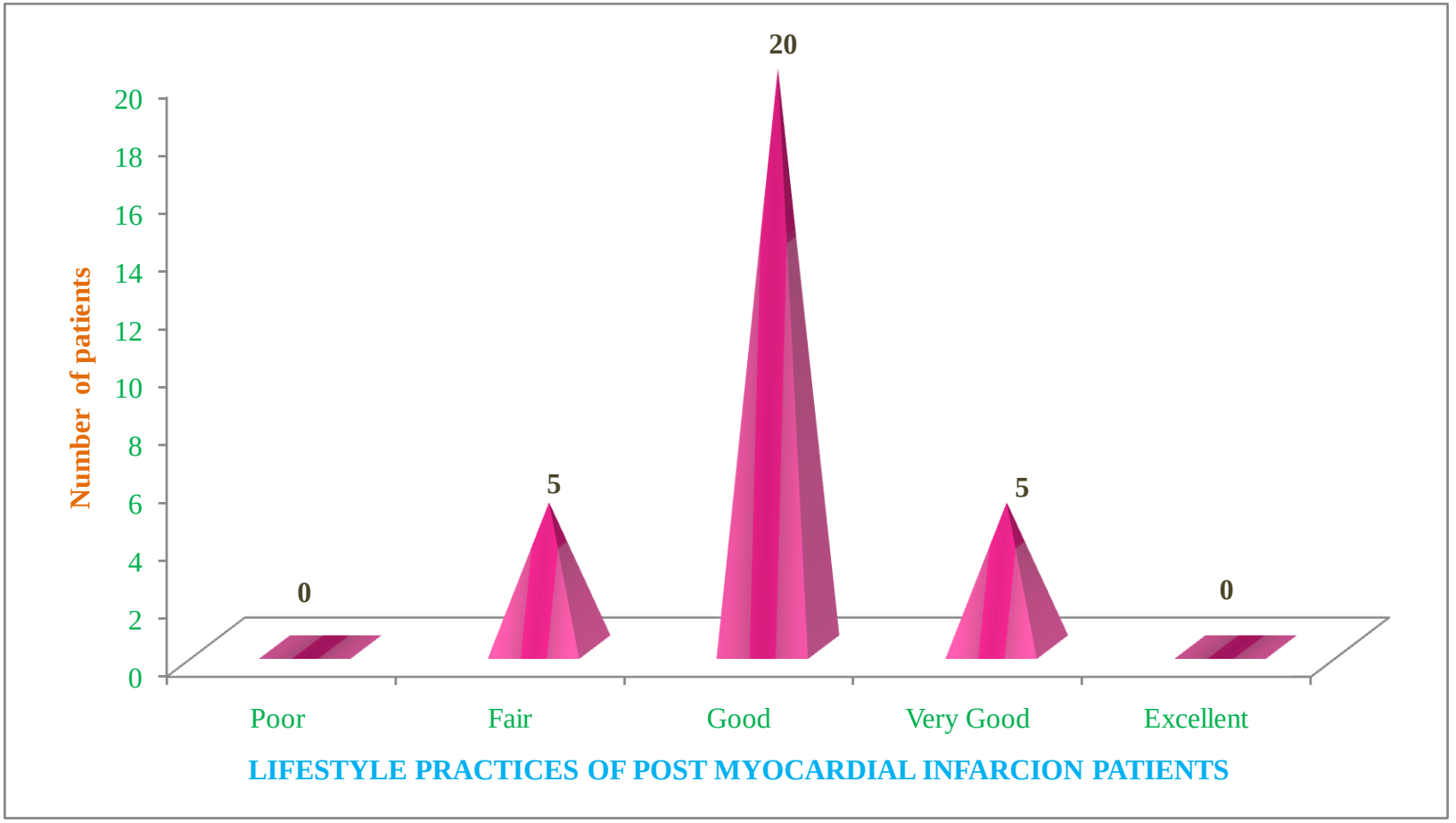


TABLE – 4.4

DISTRIBUTION OF LEVEL OF KNOWLEDGE ON LIFESTYLE MODIFICATION IN EXPERIMENTAL AND CONTROL GROUP

n= 60

Sl no	Level of knowledge	Experimental Group				Control Group			
		f	(%)	Mean	SD	f	(%)	Mean	SD
1	Inadequate knowledge	0	-	21.86	2.20	19	63.33%	10.57	3.49
2	Moderate knowledge	2	6.67%			11	36.67%		
3	Adequate knowledge	28	93.33%			0	-		

Table (4.4) shows that the level of knowledge about lifestyle modification in the experimental and control group. The data reveals that in the experimental group none of them had inadequate knowledge, 2 (6.67%) patients had moderate knowledge, and a total of 28(93.33%) had adequate knowledge due to individualized education. In the control group 19(63.33%) patients had inadequate knowledge, 11(36.67%) patients had moderate knowledge and no one had adequate knowledge.

Table (4.4) reveals the mean knowledge level and standard deviation of the experimental group 21.86 (SD=2.20) and in the control group it was 10.57 (SD=3.49).

Table (4.4) also reveals that the mean knowledge level and standard deviation of the experimental group was 21.86 (SD=2.20) which was higher than mean (10.57) and standard deviation (SD=3.49) of the control group.

FIGURE- 4.6 DISTRIBUTION OF LEVEL OF KNOWLEDGE ON LIFESTYLE MODIFICATION IN EXPERIMENTAL AND CONTROL GROUP

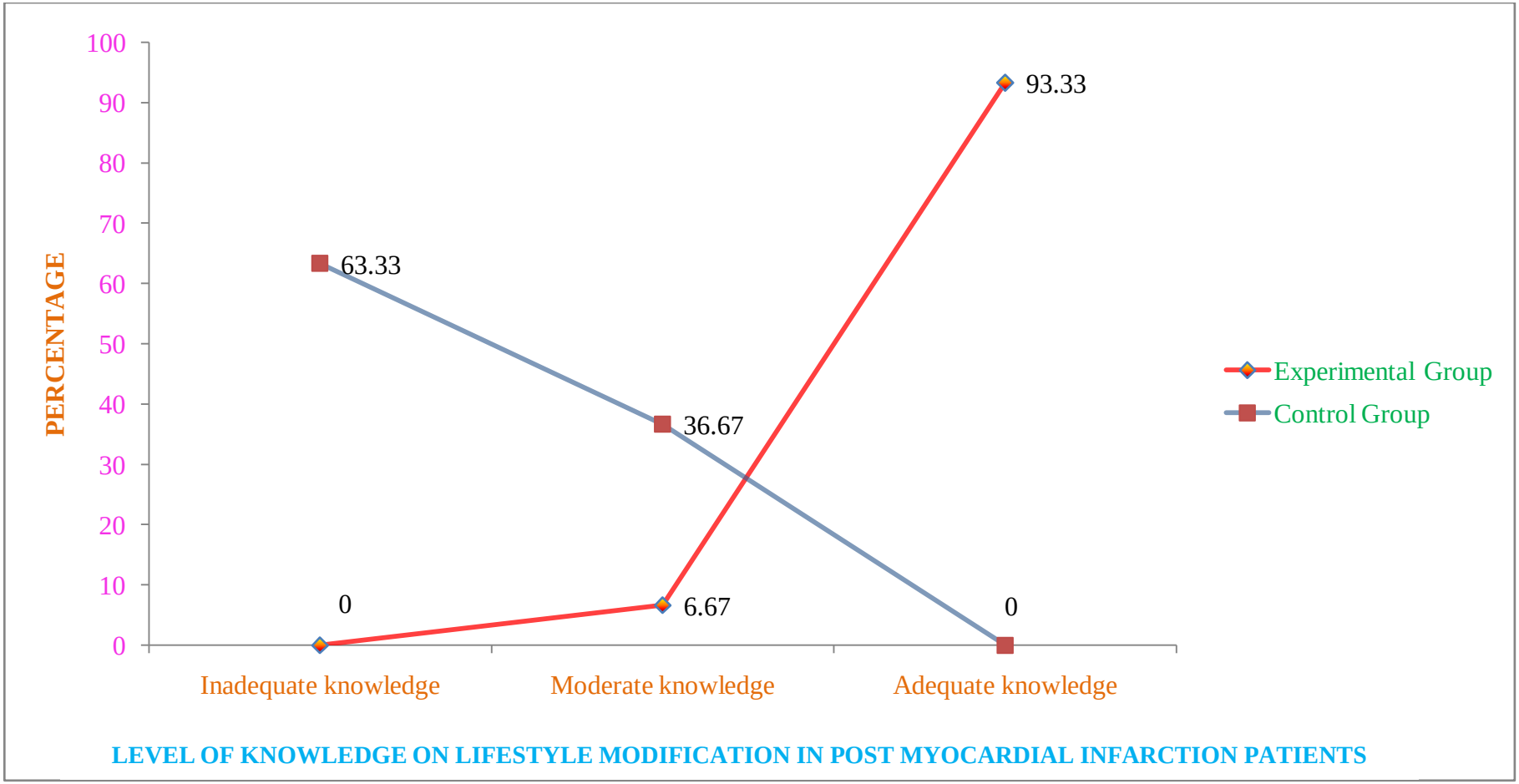


TABLE – 4.5

COMPARISON OF LEVEL OF KNOWLEDGE ON LIFESTYLE MODIFICATION IN EXPERIMENTAL AND CONTROL GROUP

n= 60

Group	Mean	Mean difference	't'-value	df	Table value
Experimental group	21.86	11.3	14.72*	58	2.00
Control group	10.57				

df- degree of freedom *level of significance 0.05

Table (4.5) shows that the comparison of knowledge level between the experimental and control group. 't' test value was calculated using two mean 't' test for independent sample.

The calculated' value (14.72) is higher than the table value (2.00). Therefore, there is a significant difference in the post test knowledge score on lifestyle modification among experimental and control groups at 0.05 level.

TABLE 4.6

ASSOCIATION OF LIFESTYLE PRACTICES WITH SELECTED DEMOGRAPHIC VARIABLES

n=30

S. no	Demographic variables	Lifestyle practices			Chi square value	Table value	Level of signif-icance
		Fair	Good	Very Good			
Age(years)					χ^2=4.25 df=6	12.59	NS
1	30-39	1	2	1			
2	40-49	2	7	1			
3	50-59	1	6	0			
4	≥ 60	1	5	3			
Sex					χ^2=1.01 df=2	5.99	NS
1	Male	5	17	4			
2	Female	0	3	1			
Education					χ^2=2.88 df=4	9.49	NS
1	Illiterate	0	2	0			
2	School level	4	17	5			
3	Undergraduate	1	1	0			
Religion					χ^2=19.12 df=4	9.49	S
1	Hindu	2	20	3			
2	Christian	1	0	2			
3	Muslim	2	0	0			

Occupation							
1	Unemployed	0	2	1	χ^2=7.25 df=6	12.59	NS
2	Self-employed	2	14	2			
3	Government employee	0	1	1			
4	Private employee	3	3	1			
Marital Status							
1	Single	0	1	0	χ^2=1.07 df=4	9.49	NS
2	Married	5	18	5			
3	Widowed	0	1	0			
Monthly Income							
1	≤ 10,000	5	14	4	χ^2=3.91 df=6	12.59	NS
2	10,001-20,000	0	1	0			
3	20,000-30,000	0	5	0			
4	≥ 30,0001	0	1	0			
Type of family							
1	Nuclear	4	15	5	χ^2=0.05 df=2	5.99	NS
2	Joint	1	4	1			
Family history							
1	Present	2	6	1	χ^2=2.97 df=2	5.99	NS
2	Absent	2	14	5			

Disease history					χ^2=7.515 df=8	15.50	NS
1	Hypertension	0	3	0			
2	Diabetes	1	3	1			
3	Hypertension and diabetes	0	0	1			
4	Others	0	2	0			
5	None	3	13	3			

Note: NS- Non significant S- Significant

df- Degrees of freedom Level of significance- 0.05

Table 4:6shows the association of the lifestyle practices with their demographic variables. The calculated chi square value of religion 19.12 was higher than the table value (9.49). This was found to be statistically significant at 0.05 level. Therefore there was an association with the lifestyle practices and religion among post myocardial patients. No association was found with lifestyle practices and other demographic variables among post myocardial infarction patients.

CHAPTER - V

RESULTS AND DISCUSSION

The present study was undertaken to identify the effectiveness of individualized education on lifestyle modification among post myocardial infarction patients.

The collected data of the present study was analyzed statistically and the results based on the objectives are discussed below:

1. **To assess the lifestyle practices of post myocardial infarction patients.**

Table 4.2 shows that out of 30 subjects, 29(96.67 %) were independent and only 3.33% were interdependent for carrying out their activities of daily living. This reveals that maximum number of patients were ready for education prior to discharge.

Table 4.3 shows that out of the 30 samples, 20(66.66%) of them had good practice and 5(16.67%) had either fair or a very good lifestyle practices. None of them had an excellent lifestyle .This emphasizes the importance of education to modify the lifestyle practices and to have a healthy lifestyle.

Stephanie E. et.al.,(2006) conducted a study at the Harvard school of public health and prospectively monitored 42,847 men out of which 2183 had coronary heart disease. Five lifestyle factors such as absence of smoking, low body mass index, moderate-tovigorous activity, moderate alcohol consumption and healthy diet had declined the risk for coronary heart disease. Men, who practicedall the five lifestyle practices, had a lower risk of disease in comparison with those who practiced none of them.With five healthy lifestyle practices, sixty-two percentof coronary events had been prevented .Also,fifty-seven percentage of coronary events were prevented with low-risk lifestyle among men who were taking medication forhypercholesterolemia or hypertension in contrast with the men who did not change their lifestyle during their follow-up. These findings highlight the importance of lifestyle changes after myocardial infarction.

2. To assess the effectiveness of individualized education on lifestyle modification.

Table (4.4) shows that the level of knowledge about lifestyle modification in the experimental and control group. The data reveals that in the experimental group 0(0%) patients had inadequate knowledge, 2 (6.67%) patients had moderate knowledge, and a total of 28(93.33%) had adequate knowledge due to individualized education. In the control group 19(63.33%) patients had inadequate knowledge, 11(36.67%) patients had moderate knowledge and none of them had adequate knowledge.

Table (4.4) also reveals that the mean knowledge level and standard deviation of the experimental group was 21.86 (SD=2.20) and in the control group it was 10.57 (SD=3.49).

Table (4.4) also reveals that the mean knowledge level and standard deviation of the experimental group was 21.86 (SD=2.20) higher than the mean (10.57) and standard deviation (SD=3.49) of the control group.

Table (4.5) shows that the comparison of knowledge level between the experimental and control group. The calculated' value (14.72) was higher than the table value (2.00). Therefore there was a significant difference noted in the post test knowledge score on lifestyle modification among experimental group at 0.05 level.

Knowledge is a significant pre-requisite to implement lifestyle modification. **Muhammad S Khan** (2006) conducted a study to assess the level of knowledge of changeable risk factors among patients admitted in a tertiary care hospital in Karachi, Pakistan. A structured questionnaire was used to conduct interview among 720 subjects. The knowledge of four modifiable risk factors of cardiovascular diseases such as smoking, obesity,exercise and fatty food consumption were assessed. The findings highlighted that there was lack of knowledge on modifiable risk factors for heart disease.

Niamh Garvey, Brendan Noonan (2011) conducted a literature review in which individualized education was identified as the most effective needamong post myocardial infarction patients. Educational preferences, social factors and stage of recovery needs were individually assessed. Education specific to the individual

patient were compiled and the most appropriate education method was chosen through which the information can be delivered.

3. To associate the lifestyle practices with selected demographic variables

Table 4:6shows the association of the lifestyle practices with demographic variables among post myocardial infarction patients.

The table shows the calculated chi square value of religion which was 19.12, was higher than the table value (9.49). This was found to be statistically significant at 0.05 level. Therefore there was an association with the lifestyle practices and religion of post myocardial patients. No association was found with lifestyle practices and other demographic variables among post myocardial infarction patients.

R. B Singh et al.,(1997) in their cross-sectional Indian social class and heart survey studied the association of socioeconomic status with prevalence of coronary artery disease and coronary risk factors among north Indians. The population was divided into social classes one to four based on their ownership of land occupation, education, housing conditions, per capita income and ownership of consumer durables. The social classes one and two were mostly high and middle income socio-economic groups and three and four were low income groups. the results showed a significant higher prevalence of hypertension ,hypercholesterolaemia and sedentary lifestyle among classes one and two in both sexes. The population also associatied higher serum cholesterol, bodymass index, triglycerides and blood pressures .Thus,survey concluded that high and middle socio-economic groups have higher prevalence of coronary arterydisease and its risk factors such as, higher body mass index, hypercholesterolaemia,hypertension and sedentarylifestyle.

CHAPTER - VI
SUMMARY, CONCLUSION, NURSING IMPLICATIONS AND RECOMMENDATIONS

This chapter represents the summary, conclusion, implications and recommendations which create a base for researcher for evidence based practice.

SUMMARY

An effective educational strategy is the need of the hour in post myocardial infarction patients. Although advancement in medical innovations makes a breakthrough in cardiac science, the incidence of myocardial infarction is still on the rise. This is primarily due to the lifestyle practice adopted by majority of individuals. This incidence can be brought down enormously by their lifestyle practices. Since, the lifestyle practice of each individual varies it was decided to assess them individually and to teach about the lifestyle modifications.

This study was selected "to assess the effectiveness of individualized education on lifestyle modification among post myocardial infarction patients in GKNM Hospital, Coimbatore"

Orem's general theory of nursing was adopted for conceptual framework. An extensive review of literature, expert's guidance lead the researcher to design the methodology.True experimental, posttest only control group design was selected for this study. Pilot study was conducted for 2 weeks to assess the reliability and feasibility of the tool.

The main study was conducted from 28.07.13 to 24.08.13. 60 samples were selected by using convenient sampling technique. Data collection was done for a period of 4 weeks. A sample of 60 post myocardial infarction patients were selected by using non-probability convenient sampling technique, 30 in each experimental and control group. Initially, demographic data was collected in both groups. Further, in the experimental group, the activities of daily living were assessed to know the readiness of the patient for education and the lifestyle practices was assessed. Based on these practices, individualized education on the lifestyle modification after myocardial infarction was given. Following which post test on the knowledge regarding the lifestyle modification after myocardial infarction was assessed using structured interview questionnaire which was carried out on the next day after education among

the experimental and control groups. The collected data was analyzed using both descriptive and inferential statistics.

The findings of the study showed that the knowledge level was higher in those who received individualized education than those who did not receive individualized education on lifestyle modification.

CONCLUSION

Thus, the study concluded that individualized education on the lifestyle modification was a highly effective, eminent and cost-effective intervention for improving the knowledge and created awareness among post myocardial infarction patients and helped them to adopt a healthy lifestyle.

NURSING IMPLICATIONS

Nursing has now bloomed as a profession and we ought to implement our knowledge and experience in all the spheres of the profession such as nursing service, education, research and administration; which paves the way for better future for nurse professionals. The findings of this study have implications for the areas of nursing practice, nursing education, nursing administration and nursing research.

Nursing practice

- Nurses are in a prime responsible position to assess patient's educational needs and with the help of evidence-based practice and research findings, nurses can implement educational programmes that will provide the most effective education for the individual patient .
- A protocol on lifestyle modifications post myocardial infarction can be prepared and taught to the patients.
- Nurses can play a vital role in motivating the post myocardial infarction patients to implement lifestyle modification through innovative techniques and counselling.
- Nurses can develop evidence based practise and include individualized education as an integral nursing intervention

Nursing Education

Findings of the present study have an implication in nursing education.

- ✦ Nursing curriculum need to be strengthened to enable students to know about the current advancements in the prevention of myocardial infarction and imparting lifestyle changes in patients and utilize evidence based findings.
- ✦ Nursing curriculum should inculcate clinical experience for conducting individualized educational programmes for nursing students.
- ✦ The nurse educator should arrange in-service education program for the student nurses and continued nursing education for the staff nurses by regularly updating their knowledge on the aspect of lifestyle modification to prevent myocardial infarction.
- ✦ This study emphasis the need for the preparation and use of effective audio visual modules and for developing good teaching skills on lifestyle modification strategies among student and staff nurses , who plays a key role in assessing and managing the cardiac patients.

Nursing Administration

- ✦ Continuous quality assessment can be done by the hospital administrators to evaluate and reconstruct and adopt evidence-based lifestyle modification techniques.
- ✦ Should incorporate in- service education during the induction programme to update the knowledge of the novice nurses.
- ✦ Surveys may be conducted and teaching programmes may be organized at community settings to create awareness on lifestyle changes to prevent cardiac events.
- ✦ Should implement mass media interventions to make the public aware of the prevention of myocardial infarction.

Nursing Research

- The essence of the study findings may help develop a body of knowledge about providing on individualized education on lifestyle modification among post myocardial infarction patients.

- Evidence based nursing practice must take higher profile in order to increase the awareness about lifestyle modification and help patients to implement these changes in their life.

- Nurses and nursing students should be encouraged to undertake the research projects on lifestyle modifications after myocardial infarction.

- Sharing the result of the research is vital reports of meeting and articles in professional journals will assist in disseminating the findings.

RECOMMENDATIONS

This study recommends the following for further research

- A study can be done for larger samples at different settings.
- A study can be conducted to assess the knowledge of the nurses working in the cardiac unit regarding lifestyle changes to be implemented after myocardial infarction.
- Health education on methods for leading a healthy life can be given at school level.
- The hospital management can form a cardiac rehabilitation team and help patients to recover from myocardial infarction and lead a healthy life.

ABSTRACT

An experimental study was conducted to "assess the effectiveness of individualized education on lifestyle modification among post myocardial infarction patients in GKNM Hospital, Coimbatore"**. Objectives: 1.**To assess the lifestyle practices of post myocardial infarction patients.**2.** To assess the effectiveness of individualized education on lifestyle modification among post myocardial infarction patients. **3.** To associate the lifestyle practices with selected demographic variables. **Research design:** True experimental, post test only control group design. **Setting:** Cardiac wards of G. Kuppuswamy Naidu Memorial Hospital, Coimbatore. **Samples:** Sixty subjects were selected who fulfilled the inclusion criteria. **Sampling techniques:** Convenient sampling technique. **Conceptual framework:**The conceptual framework used for this study was the Orem's general theory of nursing. **Methods:** A true experimental, posttest only control group design was adopted. A sample of 60 post myocardial infarction patients were selected by using non-probability convenient sampling technique, 30 in each experimental and control group. Initially, demographic data was collected in both groups. Further, in the experimental group, the activities of daily living were assessed to know the readiness of the patient for education and the lifestyle practices was assessed. Based on these practices, individualized education on the lifestyle modification after myocardial infarction was given. Following which post test on the knowledge regarding the lifestyle modification after myocardial infarction was assessed using structured interview questionnaire which was carried out on the next day after education on both the groups. The collected data was analyzed using both descriptive and inferential statistics. **Result:** The mean knowledge level score and standard deviation of the experimental group was 21.86 (SD=2.20) higher than mean (10.57) and standard deviation (SD=3.49) of the control group and 't' value 14.72.Two mean 't' for independent samples showed a significant difference in the post test knowledge score on lifestyle modification among experimental and control group at 0.05 level. This finding indicated that the individualized education was highly effective. **Conclusion**: The study concluded that, individualized education on the lifestyle modification was highly effective, eminent and cost-effective intervention for improving the knowledge and creating awareness among post myocardial infarction patients about the lifestyle modification and helped them to adopt a healthy lifestyle post myocardial infarction.

REFERENCES

BOOKS

1. **Arelena, P. (1996).** Medical Surgical Nursing. (1st edition). New York: Saunders Publishers.
2. **Basavanthappa, B.T. (2003).** Nursing Research. (Ist edition). New Delhi: Jaypee Brothers Publications.
3. **Basvanthappa, B. T. (2007).** Nursing Theories (1st edition). New Delhi: Jaypee Brothers Medical Publishers.
4. **Black, J.M. (2001).** Medical Surgical Nursing. Singapor: W. B. Saunder's Company.
5. **Black, J.M., & Jacobs, E.M. (2007).** Medical Surgical Nursing. (5th edition). Philadelphia: W.B.Saunders Company.
6. **Black, M. Joyce., (2001).** Textbook of Medical Surgical Nursing. Edition.New York: Saunders Publishers
7. **Brunner & Suddarth., (2010).** Medical and Surgical Nursing. 10th edition.Williams and Wilkins.
8. **Burns, N., and Groove, S.K. (2002).** Understanding Nursing Research. (2nd edition). New Delhi: Harcourt (India) Private Limited Publication.
9. **Daniel, W.W. (2004).** Biostatistics- A Founder for Analysis in Health Science. (7th Edition). New Delhi: Pushpa Prince Service. Education.
10. **Dennis, F., Pollit., & Bernadette. (2004). Nursing research**. LippincottWilliams and Wilkins..
11. **Elakkuvana Bhaskara Raj, D. (2011).** Nursing Theories: A Practical View.1st edition. Bengaluru: Jaypee Brothers Medical Publishers Pvt Ltd.
12. **Elenar, T., and Tceece. (1982).** Essentials of Research in Nursing. (2nd edition). London: Mosby publications.
13. **Eric, J.Topol., (2002).** Textbook of Cardiovascular medicine. 2nd edition.Lippincott & Williams and Wilkins.
14. **Ewen, M.M., & Wills, M.E. (2007)**. Theoretical basis for nursing. Philadelphia: Lippincott Williams and Wilkins.
15. **George, J.B. (1990)**. Nursing theories. Norwalk. Appleton and Lange.
16. **Gupta, S.P., (2005).** Statistical Methods. (32nd edition). New Delhi: Sultan Chand & Sons Education Publishers.

17. **Huntsberger, D.V., and Billingsley, P.P. (1989).** Statistical Inference. (6th edition).United States of America: Brown Publishers.
18. **Ignastsvicius, D.D., & Linda, W. (2004).** Text Book Of Medical Surgical Nursing. (4th Edition). Philadelphia: W.B. Saunders Company.
19. **Julia, B, George. (2011).** Nursing Theories (6^{th} edition). Noida: Parison Publications
20. **Kathleen, Shafer., Janet, R. et al. (2004).** Medical Surgical Nursing. (7th edition). New Delhi: B.I. Publication.
21. **Kenneth, S. (2002)**. Research Design and Methods. (4th Edition). Boston: McGraw Publication.
22. **Kothari, C.R. (1996).** Research methodology. New Delhi: Vishwa Prakshan Publishers.
23. **Kozier., Erb, G. et.al (2004).** Fundamentals of Nursing. (7th edition). New Delhi: Pearson.
24. **Lewis, S.M. (2006).** Medical Surgical Nursing. London: Mosby Publications.
25. **Lynda, D. Urdan., (2010).** Critical care Nursing. 6th edition. Mosby Publishers
26. **Lynda, S. Williams., (2003).** Medical Surgical Nursing. 2nd edition. Philadelphia: F A Davis Company.
27. **Lynn Basford., (2005).** Theory and Practice of Nursing. 2nd edition. Nelson Thornes Publishers.
28. **Mahajan, B.K. (2007).** Methods In Biostatistics. (7th Edition). New Delhi: Jaypee Brothers publication.
29. **Manoharan, M., Palanichami, S. (1997).** Statistical Methods. (1st edition). Tamil Nadu: Palani Paramount Publications.
30. **Martha., & Marriner, Tomey. et al. (2003).** Nursing Theory Utilization and Application. (2nd edition). Chicago: Lippincott Publishers.
31. **Merlin, E.P. (2007).** Nursing Theories and Nursing Practice. (1st Edition). New Delhi: Jaypee Publication.
32. **Negi, K.S. (2006).** Biostatistics. (2nd Edition) NewDelhi : AITBS Publication.
33. **Park, K.,** (**2010).** Textbook of Social & Preventive Medicine. 22nd edition.New Delhi: Banarsidas Bhanot publishers.
34. **Pillai, R.S.N., & Bagavathi. (2003).** Practical Statistics. (2nd edition). New Delhi: Chand and Sons Company Publication.

35. **Polit, D.F., & Beck, C.T. (2006).** Nursing Research. (7th edition). New Delhi: Wolters Kluwer Health publication.
36. **Polit, D.F., & Hungler, B.P. (1999).** Nursing Research: Principles And Methods (6^{th} ed.). Philadelphia: Lippincott publishers.
37. **Potter, P., & Perry, A.G. (2006).** Fundamentals of Nursing. (5th edition). St. Louis: Lippincott Publication.
38. **Prabhakara, G.N. (2006).** Biostatistics. (Ist edition). New Delhi:Jaypee Brothers Publications.
39. **Ruth, F. Craven., & Constance, J. Hirnle. (2006)**. Fundamentals of Nursing. 5th Edition. Philadelphia: Lippincott Williams & Wilkins Publications.
40. **Sembulingam, K., &Prema, Sembulingam. (2005).** Essentials of Medical Physiology. (3rd edition). New Delhi: Jaypee Publication.
41. **Sharon, L. Lewis., Shannon, Ruff, Dirksen., Margaret, McLean, Heitkemper., & Linda, Bucher., (2006).** Medical Surgical Nursing. (7th Edition). London: Mosby Publications.
42. **Smeltzer, S. C., & Baer, B. G. (2008).** Textbook of Medical Surgical Nursing. (10th edition). Philadelphia: Lippincott Publication.
43. **Spielberger, C. D. (1992).** Trends in theory and research on anxiety. New York: Academic Press
44. **Sunder Rao., & Richard, J. (1996).** An Introduction to Biostatistics. (3rd edition). New Delhi: Vora Medical publications.
45. **Suresh, K, Sharma. (2011).** Nursing Research & Statistics (1^{st} edition) Noida: Elsevier publications.
46. **Susan, L. Wood., (2011).** Cardiac Nursing. 6th edition. Lippincott Williams & Wilkins.
47. **Wesley, L. (1992).** Nursing Theories and Models. (5th edition). Pennsylvania: Springhouse Corporation.
48. **WHO. (2004).** Atlas of Heart Disease and Stroke.

JOURNALS

1. **Abhinav Goyal & Salim Yusuf(2006).**The burden of cardiovascular disease in the Indian subcontinent, Indian Journal Medical Research.124,235-244.
2. **Ali Janati ,Hossein Matlabi et al.,(2011).**Socioeconomic Status and Coronary Heart Disease Health Promotion Perspectives, 1(2),105-110.
3. **Alexander Chernobelsky , M. Dominique Ashen, et al.,(2007).**High Density Lipoprotein Cholesterol: A potential Therapeutic Target for Prevention of Coronary Artery Disease,Preventive Cardiology ,10(1), 26-30.
4. **Barnoya J, Glantz SA.,(2005).** Cardiovascular effects of second-hand smoke: nearly as large as smoking. Centre for Tobacco Control Research and Education, Circulation. 24; 111(20):2684-98.
5. **Bellman C, et al.,(2009).** Achievement of secondary preventive goals after acute myocardial infarction: a comparison between participants and nonparticipants in a routine patient education program in Sweden. Journal of Cardiovascular Nursing,24(5),362-8.
6. **Biju Poulose , Krishnamachari Srinivasan. (2009).**High risk behaviours following alcohol use in alcohol dependent men. Indian Journal Medical Respiratory. 35(5),74-79.
7. **Blumenthal ,JA, Babyak MA, Carney RM(2004)**.Exercise, Depression, and Mortality after Myocardial Infarction in the ENRICHD Trial. Medical Science Sports Exercise, 36(5), 746-755.
8. **Buckley T, McKinley S (2007).**The effect of education and counselling on knowledge, attitudes and beliefs about responses to acute myocardial infarction symptoms. European Journal of Cardiovascular Nursing,6(2),105-11.
9. **Biyik and Ergene(2007)**.Alcohol and acute myocardial infarction. The Journal of International Medical research,35(1),46-51.
10. **Canto J G(2012)**.Association of age and sex with myocardial infarction symptom presentation and in-hospital mortality.The journal of the American Medical Association, 307(8),813-22.
11. **Carlsson.R, et al.,(1997) .**Influence of coronary nursing management follow up on lifestyle after acute myocardial infarction.Heart,77(3),256-259.

12. **Cook NR, et al., (1998).**Effect of change in sodium Excretion on change in blood pressure corrected for measurement error. The Trials of Hypertension Prevention, Phase I. American Journal of Epidemiology,148(5),431–444.
13. **Daniel, C.R. et al., 2011.** A cross-sectional investigation of regional patterns of diet and cardiometabolic risk in India**.** Nutrition Journal,10 ,12-15.
14. **Daniel E. Hilleman, et al.,(2004)** Comparison of Conservative and Aggressive Smoking Cessation Treatment Strategies Following Coronary Artery Bypass Graft Surgery .Chest,125,435–438.
15. **Duryee R (1992).** The efficacy of inpatient education after myocardial infarction. Heart Lung ,21(3),217-25.
16. **Eakin EG, Glasgow RE, et al.,(2000).** Review of primary care-based physical activity intervention studies: effectiveness and implications for practice and future research. Journal of Family Practice,49(2),158–68.
17. **Edwin J Whitney , Richard A. Krasuski, et.al.,(2005).**A Randomized Trial of a Strategy for Increasing High-Density Lipoprotein Cholesterol Levels: Effects on Progression of Coronary Heart Disease and Clinical Events.Annalsof Internal Medicine,142,95-104.
18. **Elliott P, Jeremiah Stamler, et al.,.(1996)**Intersalt revisited: further analyses of 24 hour sodium excretion andBlood pressure within and across populations. Intersalt Cooperative Research Group. British Medical Journal, 312,1249 –1253.
19. **Estabrooks PA, Glasgow RE, Dzewaltowski D.(2003).,** Physical activity promotion through primary care. Journal of the American Medical Association,289(22),2913–6.
20. **Franklin B, de Jong A, Kahn JK,et al.,(2004**) Fitness and mortality in the primary and secondary prevention of coronary artery disease: Does the effort justify the outcome? American JournalSports Medicine, 6,23–27.
21. **Fioretti F,et al.,(2000)** Menopause and risk of non-fatal acute myocardial infarction: an Italian case-control study and a review of the literature.Human reproduction15(3):599-603
22. **Fuchs CS,et.al.,(1995).,** Alcohol consumption andmortality among women. The New England Journal of Medicine, 332,1245-50.
23. **Gupta. R, et al., (2008).** Epidemiology and causation of coronary heart disease and stroke in India. Heart 94(1),16-26.

24. **Gupta. R, et al.,(1994).** Educational status, coronary heart disease, and coronary risk factor prevalence in a rural population of India.British Medical Journal 309(6965):1332-6
25. **Hanssen TA, Nordrehaug JE, Hanestad BR.,(2005)** A qualitative study of the information needs of acute myocardial infarction patients, and their preferences for follow-up contact after discharge.European Journal of Cardiovascular Nursing,4(1) 37-44
26. **Hye-Sun Jeong, et al.,(2002)** An individualized teaching program for atherosclerosis risk factor reduction in patients with myocardial infarction,43(1),93-100.
27. **J.A. Iestra, et al., (2005).,**Effect Size Estimates of Lifestyle and Dietary Changes on All-Cause Mortality in Coronary Artery Disease Patients-A Systematic Review.Circulation,112,924-934.
28. **Johnston D W(1999)** Lifestyle changes after a myocardial infarction,Heart,1999,82,543-544
29. **Joshi P,et al.,(**2006). Risk factors for early myocardial infarction in South Asians compared with individuals in other countries. Journal of the American Medical Association. 297(3),286-94.
30. **J S Skinner, A Cooper, and G S Feder(2007**) Secondary prevention for patients following a myocardial infarction: summary of NICE guidance,Heart,93(7),862-864
31. **Li S, Chiuve SE,(2013).** Better diet quality and decreased mortality among myocardial infarction survivors. Heart, 77(3):256-9**.**
32. **Lindberg G, Westin L, et al.,(1997)** Influence of coronary nursing management follow up on lifestyle after acute myocardial infarction
33. **Mohan.V.et al., (2005)**Association of physical inactivity with components of metabolic syndrome and coronary artery disease-The Chennai Urban Population Study (CUPS).Diabetic Medicine,22,1206-11
34. **Mohan.V, S. Sandeep, R. Deepa, B. Shah& C. Varghese(2007).**Epidemiology of type II Diabetes: Indian Scenario, Indian Journal Medical Research.125,217-230
35. **Naresh R.Makwana, et al.,(2007).**A Study on Prevalence of Smoking and Tobacco Chewing among Adolescents in rural areas of Jamnagar District, Gujarat State. Journal of Medical Science and Research 30, 36-38

36. **Niamh Garvey et al.,** British Journal of Cardiac Nursing, Providing individualized education to patients post myocardial infarction: A literature review.6(2), 73 - 79
37. **Oterhals K, Hanestad BR,et al.,(2006)** The relationship between in-hospital information and patient satisfaction after acute myocardial infarction. European Journal of Cardiovascular Nursing,5(4)303-10.
38. **Prakash C. Deedwania et al.,(2012)** Association of Educational, Occupational and Socioeconomic Status with Cardiovascular Risk Factors in Asian Indians: A Cross-Sectional Study.Public library of Science7(8)
39. **Rastogi T,et al.,(2004)** Diet and risk of ischemic heart disease in India. American Journal of Clinical Nutrition,79(4),582-92.
40. **Riegel B, Gocka I.(1995**) Gender differences in adjustment to acute myocardial infarction. Heart Lung. 24(6),457-66.
41. **R. B. Singh et al.,(1997).**Social class and coronary disease in a rural population of north India. European Heart Journal,18,588-595.
42. **Roohafza H, et al.,(2013).**Opium decreases the age at myocardial infarction and sudden cardiac death: a long- and short-term outcome evaluation,Archives of Iranian medicine 16(3),154-60.
43. **Ron T. van Domburg,et al.,(2000).**Smoking Cessation Reduces Mortality After Coronary Artery Bypass Surgery: A 20-Year Follow-up Study.Journal oftheAmerican College of Cardiology,36,878 – 883
44. **S.B. Sharma, S. Dwivedi, et al.,(2005).**Coronary risk variables in young asymptomatic smokers, Indian Journal Medical Respiratory,122, 205-210
45. **S.K. Jindal, A et al.,(2006)**Tobacco smoking in India: Prevalence, Quit rates and respiratory morbidity. The Indian Journal of Chest Diseases and Allied Sciences,48,134-240.
46. **Schorr U , Blaschke K, Turan S(1998),**Relationship between angiotensinogen, leptin and bloodpressure levels in young normotensive men.Journal of Hypertension,16, 1475-80.
47. **Shishir Karthik, et al .,(2006)** Risk factor awareness and secondary prevention of coronary artery disease: are we doing enough?Interactive cardiovascular and thoracic surgery, 391, 26-27.
48. **Stampfer MJ, et al (1988).**A prospective study of moderate alcohol consumption and the risk of coronary heart disease and stroke in women. New English Journal of Medicine; 319 ,267-73.

49. **Steinke E, Patterson-Midgley P(1996).** Sexual counseling following acute myocardial infarction,Clinical Nursing research,5(4),462-72
50. **Steinke EE, Swan JH(2004).**Effectiveness of a videotape for sexual counseling after myocardial infarction.Research in Nursing Health**,**27(4),269-80.
51. **Stephen J Bunker et al.,(2003)** "Stress" and coronary heart disease: psychosocial risk factorsMedical Journal of Australia**,**178, 17
52. **Stewart DE, Abbey SE et al., (2004)** Gender differences in health information needs and decisional preferences in patients recovering from an acute ischemic coronary event. Psychosomatic Medicine,66(1),42-8.
53. **T.N. Sugathan ,C.R. Soman& K. Sankaranarayanan.(2008).**Behavioural risk factors for non communicable diseases among adults in Kerala, India .Indian Journal of Medical Research,.41(8),45-63
54. **V. Mohan, Deepa. (2006).**Obesity & abdominal obesity in Asian Indians, Indian Journal Medical Research ,123, 593-596.
55. **Van't veer p et al., Jansen MC, Klerk M, Kok FJ.(2000).**Fruits and vegetables in the prevention of cancer and cardiovascular disease. Public Health Nutrition;3, 103-7.
56. **Vestfold Heartcare Study Group. (2003)** Influence on lifestyle measures and five-year coronary risk by a comprehensive lifestyle intervention programme in patients with coronary heart disease. European Journal of Cardiovascular Prevention and Rehabilitation,10(6),429-37.
57. **Vincent K.F.Mok(2013)** Acontrolled Trial of a nurse follow-up Dietary intervention on maintaining a heart healthy dietary pattern among patients after myocardial infarction.28(3),256-266
58. **Yusuf S, et.al(2004).**Effect of potentially modifiable risk factors associated with myocardial infarction in 52 countries(the INTERHEART study): case-control study. The Lancet, Volume 364, Issue 9438, Pages 937 - 952, 11 .
59. **Yurtdaş M, Aydın MK.** Acute myocardial infarction in a young man; fatal blow of the marijuana: a case report. Korean Circulation Journal.,42(9),641-5
60. **Y Liu and H Tanaka (2002)** Overtime work, insufficient sleep and risk of non-fatal acute myocardial infarction on Japanese men,Occupational and Environmental medicine,59(7),447–451

e – REFERENCES

1. http://www.medindia.net/patients/lifestyleandwellness/heartattack-lifestyle-risks.,
2. http://www.patient.co.uk/health/relaxationexercises
3. http://www.worldheart.org/urbanization
4. http://atvb.ahajournals.org
5. http://www.who.int/cardiovascular_diseases/about_cvd/en/
6. http://www.nhs.uk/chq/Pages/2442.aspx
7. http://www.ncbi.nlm.nih.gov/pubmed/1592611
8. http://www.ncbi.nlm.nih.gov/pubmed/14747636
9. http://www.ncbi.nlm.nih.gov/pubmed/15264265
10. http://circ.ahajournals.org/content/114/2/160.
11. http://www.nejm.org/doi/full/10.1056/NEJM199404283301719
12. http://bjcardio.co.uk/2011/08/lifestyle-advice-and-drug-therapy-post-myocardial-infarction-a-survey-of-uk-current-practice/
13. http://www.scai.org/SecondsCount/Resources/Detail.
14. http://www.ncbi.nlm.nih.gov/pubmed/10686203
15. http://annals.org/article.aspx?articleid=707342
16. http://www.ncbi.nlm.nih.gov/pubmed/19042703
17. http://www.ncbi.nlm.nih.gov/pubmed/19042703
18. http://www.ncbi.nlm.nih.gov/pubmed/7989211
19. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3425028/
20. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3430674/#pone.0044098-
21. http://www.ncbi.nlm.nih.gov/pubmed/19359764
22. http://www.livestrong.com.
23. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2154238/
24. https://www.healthcare.uiowa.edu/igec/tools/function/katzADLs.pdf
25. www.lyndapedley.com/wp/wp-content/uploads/.../fantastic-lifestyle.doc

OTHER REFERENCES

1. **Aparna kuna,Poshadri(2013).** Phytoesterols for heart. Health 90(9),35-38
2. **Bauman A, Bellew B, Vita P, Brown W, Owen N. (2002)** Getting Australia active: Towards better practice for the promotion of physical activity. National Public Health Partnership.

3. **Jeannine S. Schiller, et al(2012)** Centre for disease control, Vital health statistics, Summary Health Statistics for U.S. Adults: National Health Interview Survey, 2011,10(256),13.
4. **IOM (Institute of Medicine),** 2010. Promoting cardiovascular health in the developing world: A critical challenge to achieve global health
5. **Janet M. Torpy(2007),**Chronic Stress and the Heart,The Journal of the American Heart Association 298(14),1722
6. **Leon AS, Sanchez OA.(2001)** Response of blood lipids to exercise training alone or combined with dietary intervention.Medicine and Science in Sports and Exercise;33(6 Suppl):S502–15.
7. **Nancy R Cook , et al.,(2007).** Long term effects of dietary sodium reduction on cardiovascular disease outcomes: observational follow-up of the trials of hypertension prevention(TOHP). British Medical Journal, doi:10.1136/bmj.39147.604896.55 (published 20 April 2007)
8. National Collaborating Centre for Primary Care .Post Myocardial Infarction - Secondary prevention in primary and secondary care for patients following a myocardial infarction Full guideline – Final Version May 2007
9. **Petrella RJ, Lattanzio CN.(2002)** Does counseling help patients get active? Systematic review of the literature. Canadian Family Physician;48:72–80.
10. **Paul D. Thompson(2009).**Exercise and Physical Activity in the Prevention and Treatment of Atherosclerotic Cardiovascular Disease, **AHA Scientific Statement., circ.ahajournals.org/content/107/24/3109.long**
11. **Smith, S. et al.,(2012).** Urbanization and cardiovascular disease: Raising heart-healthy children in today's cities. The World Heart Federation
12. Penny M. Kris-Etherton,et al.,(2003) Fish consumption and CVD,AHA scientific statement.atherosclerosis, thrombosis and vascular biology ,American heart association journal,8-9
13. **Stephanie E. Chiuve, et al.,(2006)** Healthy Lifestyle Factors in the Primary Prevention of Coronary Heart Disease Among Men **Preventive Cardiology Circulation.circ.ahajournals.org**
14. **Uysal H, Ozcan S.(2013)** The effect of individual education on patients' physical activity capacity after myocardial infarction. International Journal of Nursing Pracice 2013 Nov 15. doi: 10.1111/ijn.12193.

APPENDIX – A

PERMISSION TO CONDUCT THE STUDY

Ms.Jessy Sanjeevini.R II year M.Sc Nursing Student conducted a study on**"A Study to Assess the Effectiveness of Individualized Education on Lifestyle Modification among Post Myocardial Infarction Patients in GKNM Hospital , Coimbatore"** with the approval of the ethical committee during the academic year of 2013 – 2014 in GKNM Hospital, Coimbatore. This is the partial fulfillment of the requirement for award of the degree in Master of Science, Branch-I, Medical Surgical Nursing, subspecialty- Cardiovascular and Thoracic Nursing, by the Tamilnadu Dr. MGR Medical University.

Dr. RamkumarRaghupathy, M.S., M.Ch.,FIAPS., MBA.,
DEAN

APPENDIX – B

LIST OF EXPERTS

Dr.S.NATARAJAN. MD., MNANS., DM., FICS., FAPSC.,
HOD, Cardiology
Department GKNM Hospital,
Coimbatore- 641 037.

Dr.S.MADHAVI, Ph.D (N).,
Principal,
KMCH College of Nursing,
Coimbatore-641014.

Prof. RAJI. K. MS.c (N), Ph.D (N).,
HOD, Department of Medical and Nursing,
KG College of Nursing,
Coimbatore- 641 018.

Prof. TAMILSELVI, M.Sc (N).,
HOD, Department of Medical and Nursing,
PSG College of Nursing,
Coimbatore- 641 004.

APPENDIX-C1

DATA COLLECTION TOOL IN ENGLISH

SECTION-A -STRUCTURED INTERVIEW QUESTIONNAIRE ON DEMOGRAPHIC DATA

Instructions:

Please give appropriate information to the following questions asked. The information obtained will be kept confidential and is used only for the intended work.

1. Age in years a) 30-39 ☐

b) 40-49 ☐

c) 50-59 ☐

d)>60 ☐

2. Sex a) Male ☐

b) Female ☐

3. Education a) Illiterate ☐

b) School level ☐

c) Under graduate ☐

d) Post graduate ☐

4. Occupation a) Unemployed ☐

b) Self employed ☐

c) Govt. employee ☐

d) Private employee ☐

5. Religiona) Hindu ☐

b) Christian ☐

c) Muslim ☐

d) Others ☐

6. Marital Status a) Single ☐

b) Married ☐

c) Widowed ☐

d) Divorced ☐

7. Type of family a) Nuclear ☐

b) Joint ☐

8. Monthly income: (In Rs/-)

a) <10,000 ☐

b) 10,001 – 20,000 ☐

c) 20,001 – 30,000 ☐

d) Above 30,000 ☐

9. Do you have a family history of heart attack?

a) Yes ☐

b) No ☐

10. Do you have any of these diseases?

a) Hypertension ☐

b) Diabetes ☐

c) Others ☐

SECTION –B: ACTIVITIES OF DAILY LIVING ASSESSMENT SCALE

Modified Katz Index of Independence Scale of Activities of Daily Living

ACTIVITIES	INDEPENDENCE (2)	INTERDEPENDENCE(1)	DEPENDENCE (0)
	No supervision, direction or personal assistance	With direction or personal assistance	With supervision, direction, personal assistance or total care
BATHING	Bathes self completely	Needs help in bathing only a single part of the body such as the back, genital area or disabled extremity.	Needs help with bathing more than one part of the body, getting in or out of the tub or shower. Requires total bathing.
DRESSING	Gets clothes from closets and drawers and puts on clothes and outer garments complete with fasteners. May have help tying shoes.	Needs help with dressing self	Needs to be completely dressed.
TOILETING	Goes to toilet, gets on and off, arranges clothes, cleans genital area without help.	Needs help transferring to the toilet only.	Needs help transferring to the toilet, cleaning self or uses bedpan or commode
MOBILITY	Moves in and out of bed or chair unassisted. Mechanical transferring aides are acceptable.	Needs help in moving from bed to chair	Requires a complete transfer.
CONTINENCE	Exercises complete self control over urination and defecation.	Is partially incontinent of bowel or bladder.	Is totally incontinent of bowel or bladder
FEEDING	Gets food from plate into mouth witout help. Preparation of food may be done by another person.	Needs partial help with feeding	Needs total help with feeding or requires parenteral feeding

Total points :6-12= High(Patient independent),1-6=Moderate (patient interdependent), 0=Low (patient very dependent)

SECTION –C

LIFESTYLE QUESTIONNAIRE

		0	1	2	3	4
FAMILY FRIENDS	I have someone to talk to about things that are important to me	almost never	seldom	some of the time	fairly often	almost always
	I give and receive affection	almost never	seldom	some of the time	fairly often	almost always
ACTIVITY	I am vigorously active for at least 30 minutes per day e.g., running, cycling, etc	Not at all	1-2 times/week	3 times/week	4 times/wk	5 or more times/wk
	I am moderately active (gardening, climbing stairs, walking, housework)	Not at all	1-2 times/week	3 times/week	4 times/wk	5 or more times/wk
NUTRITION	I eat a balanced diet	almost never	seldom	some of the time	fairly often	almost always
	I often eat excess 1) sugar, or 2) salt, or 3) animal fats,or 4) junk food	four of these	three of these	two of these	one of these	none of these
	I am within _____ kg of my healthy weight	More than 8 kg	8 kg	6 kg	4 kg	2 kg

TOBACCO TOXICS	I smoke tobacco	more than10 times/week	1 – 10 times/week	none in the past 6 months	none in the past year	none in the past 5 years
	I use drugs such asmarijuana, cocaine	sometimes				never
	I overuse prescribed or 'over the counter' drugs	almost daily	fairly often	only occasionally	almost never	never
	I drink caffeine-containing coffee, tea, or cola	more than 10/day	7-10/day	3-6/day	1-2/day	never
ALCOHOL	My average alcohol intakeper week is _____	more than 20 drinks	13-20 drinks	11-12 drinks	8-10 drinks	0-7 drinks
	I drink more than four drinks on an occasion	almost daily	fairly often	only occasionally	almost never	never
	I drive after drinking	sometimes				never
SLEEP STRESS SAFE SEX	I sleep well at night and feel rested	almost never	seldom	some of the time	fairly often	almost always
	I am able to have good afternoon knaps	never	seldom	some of the time	most of the time	always
	I am able to cope with the stresses in my life	almost never	seldom	some of the time	fairly often	almost always
	I am able to relax and enjoy leisure time	almost never	seldom	some of the time	fairly often	almost always
	I practice safe sex	almost never	seldom	Someof the time	fairly often	always

TYPE OF BEHAVIOUR	I seem to be in a hurry	almost always	fairly often	some of the time	seldom	almost never
	I feel angry or hostile	almost always	fairly often	some of the time	seldom	almost never
INSIGHT	I am a positive or optimistic thinker	almost never	seldom	some of the time	fairly often	almost always
	I feel tense	almost always	fairly often	some of the time	seldom	almost never
	I feel sad or depressed	almost always	fairly often	some of the time	seldom	almost never
CAREER	I am satisfied with my job	almost never	seldom	some of the time	fairly often	almost always

Scoring : Each questions has five options with 0-4 scores,based on the options scoring was done. The total score is 100.

SECTION D – STRUCTURED KNOWLEDGE QUESTIONNAIRE

1. What is the function of heart?

a) To transport oxygen

b) To Purification of blood

c) To supply blood to all parts of the body.

d) To maintain blood pressure.

2. What is the function of coronary arteries?

a) To store fat

b) Supplies blood to all parts of the body

c) Supplies blood to heart

d) To drain blood

3. What happens if the coronary artery is blocked?

a) Stroke

b) Gastritis

c) Infarction

d) Renal failure

4. What is the cause of blockage of coronary arteries?

a) Hypertension

b) Atheroma

c) Diabetes

d) Obesity

5. What do you understand by myocardial infarction?

a) Chest pain

b) A valve problem

c) Death of heart muscle

d) Malfunction of heart

6. Which is the preventable lifestyle risk factor of myocardial infarction?

a) Hypertension

b) Diabetes

c) Smoking

d) Early menopause

7. Which is the treatable risk factor of myocardial infarction?

a) Diabetes

b) Poor nutrition

c) Obesity

d) Ethnicity

8. Which risk factor cannot be changed?

a) Lack of exercise

b) Family history

c) Obesity

d) Stress

9. Which food group should be taken moderately after myocardial infarction?

a) Fiber

b) Proteins

c) Carbohydrates

d) Dairy Products

10. Which nutrient prevents the development of myocardial infarction?

a) Carbohydrates

b) Protein

c) Omega 3 fatty acids

d) Vitamins

11. Which blood fat lowers the risk of myocardial infarction?

a) High-density lipoprotein

b) Low-density lipoprotein

c) Cholesterol

d) Triglycerides

12. Which activity is allowed for the first 6 weeks after a myocardial infarction?

a) Lifting heavy weight

b) Stair Climbing

c) Driving

d) Swimming

13. Which statement is true regarding exercise and myocardial infarction?

a) Excessive exercise may weaken heart muscle

b) A sedentary lifestyle may prevent heart disease

c) Routine exercise may prevent heart disease

d) Exercise and heart disease are not related.

14. Which type of exercise maintains cardiovascular fitness?

a) Balance

b) Aerobic

c) Strength

d) Anaerobic

15. What are the signs to stop exercise?

a) Palpitation

b) Excessive fatigue

c) Feeling dizzy

d) All the above

16. What will you do, if you have chest pain while driving car?

a) Drive to the nearest hospital.

b) Drive home.

c) Stop and lie down.

d) Stop, take a nitroglycerin tablet, and signal for help

17. What will you do if chest pain is not relieved by 3 nitroglycerin tablet, taken within 5 minutes?

a) Lie down until discomfort subsides

b) Take another nitroglycerin tablet and wait another 5 minutes to see what happens.

c) Dial 108 or contact the emergency medical system immediately.

d) Wait until the morning and see how you feel.

18. Which statement is true regarding sleep and myocardial infarction?

a) Good sleep decreases the risk of heart disease

b) Sleep and heart disease are not related

c) Sleep has no effect on heart disease

d) Good sleep increases the risk of heart disease

19.How many hours at night should you minimally sleep to have adequate sleep?

a) 6 hours

b) 7 hours

c) 8 hours

d) 9 hours

20. Inadequate sleep in everyday life may cause which of the following?

a) Headache

b) Gastritis

c) Atheroma formation

d) Body pain

21. Is it safe to have sex after the myocardial infarction?

a) Are forbidden.

b) After consultation with your physician.

c) Are fine with your partner's permission.

d) Are not necessary at your age.

22. What is the effect of stress on heart?

a) High blood pressure

b) Damage to arteries

c) Higher cholesterol level

d) All the above

23. How will you reduce stress in your day today life?

a) Relaxation Exercises

b) Deep breathing

c) Focused imagery

d) All the above

24. How smoking contributes to the development of myocardial infarction?

a) The nicotine in inhaled smoke causes blood vessels to decrease in size.

b) The smoke from cigarettes slows the heart rate.

c) Cigarette smoking has no effect on your heart, only your lungs.

d) Cigarettes are less harmful after your first heart attack.

25. How passive smoking affects the heart?

a) Increased blood clotting ability.

b) Builds up bad cholesterol leading to risk of atherosclerosis.

c) Increases source of cell damaging free radicals.

d) All the above.

STURCTURED KNOWLEDGE QUESTIONNAIRE-ANSWER KEY

Eachcorrect response gets a score of one with a maximum score of 25

Question .No.	Answers
1	c
2	c
3	c
4	b
5	c
6	c
7	a
8	b
9	b
10	c
11	a
12	b
13	c
14	b
15	d
16	d
17	c
18	a
19	b
20	c
21	b
22	d
23	d
24	a
25	d

DATA COLLECTION TOOL IN TAMIL

பகுதி : 1

தனி நபர் விபரம்

வழிமுறைகள்:

தயவு செய்து கீழே கொடுக்கப்பட்டிருக்கும் கேள்விகளுக்கு சரியான விபரம் அளிக்கவும். தங்களிடம் பெறப்பட்ட விபரங்கள் இரகசியமாக வைக்கப்பட்டு தேவையான வேலைக்கு மட்டுமே உபயோகப்படுத்தப்படும்.

1. வயது (வருடத்தில்)

அ) 30-39

ஆ) 40-49

இ) 50-59

ஈ) >60

2. பாலினம்

அ) ஆண்

ஆ) பெண்

3. **கல்வித்தகுதி**

அ) படிக்காதவர்

ஆ) பள்ளி தகுதி

இ) இளங்கலை பட்டதாரி

ஈ) முதுகலை பட்டதாரி

4. தொழில்

அ) வேலை இல்லாதவர்

ஆ) சுய தொழில்

இ) அரசு ஊழியர்

ஈ) தனியார் ஊழியர்

5. மதம்

அ) இந்து

ஆ) கிருஸ்துவர்

இ) முஸ்லீம்

ஈ) மற்றவை

6. திருமண தகுதி

அ) திருமணமாகாதவர்

ஆ) திருமண ஆனவர்

இ) விதைவை /மனைவியை இழந்தவர்

ஈ) விவாகரத்து ஆனவர்

7. குடும்ப அமைப்பு

அ) தனிக் குடும்பம்

ஆ) கூட்டு குடும்பம்

8. மாத வருமானம் (ரூபாய்)

அ) 10,000 க்கு கீழ்

ஆ) 10,001 முதல் - 20,000 வரை

இ) 20,001 முதல் -30,000 வரை

ஈ) 30,001 க்கு மேல்

9. உங்கள் குடும்பத்தில் யாருக்காவது மாரடைப்பு ஏற்பட்டிருக்கிறதா?

அ) ஆம்

ஆ) இல்லை

10. உங்களுக்கு கீழ்கண்ட நோய்களில் ஏதாவது உள்ளதா?

அ) உயர் இரத்த அழுத்தம்

ஆ) நீரிழிவு நோய்

இ) மற்றவை

ஈ) எதுவும் இல்லை

பகுதி : 2

அன்றாட வாழ்வின் செயல்பாடுகளை அறியும் முறை மற்றும் அதன் மதிப்பீடுகள்

செயல்கள்	**தன்னிச்சையாக செயல்பாடுதல் (2 மதிப்புகள்)** (மேற்பார்வை, வழிகாட்டுதல் அல்லது தனிப்பட்ட உதவி இல்லாமல்)	**இணைசார்பு (1 மதிப்புகள்)** வழிகாட்டுதல் அல்லது தனிப்பட்ட உதவியுடன்)	**பிறரை சார்ந்து இருத்தல் (0 மதிப்பு)** (மேற்பார்வை, வழிகாட்டுதல் அல்லது தனிப்பட்ட உதவி மொத்த கவனத்துடன்)
குளியல்	முற்றிலும் சுயமாக குளித்தல்	உடலின் ஒரே பகுதியின் குளித்தலுக்குஉதவி பெறுவது (முதுகு, பிறப்புருப்பு அல்லது ஊனமுற்ற உறுப்பு)	உடலில் ஒன்றுக்கு மேற்பட்ட பகுதியில் குளித்தலுக்கு உதவி பெறுவது முழுமையாக குளிப்பதற்கு முற்றிலும் உதவி தேவைப்படுதல்
உடைமாற்றுதல்	தானாக உடைமாற்றுதல்	தானாக உடைமாற்றும்போது பிறர் உதவி நாடுதல்	முழுமையாக பிறர் உதவியுடன் உடை மாற்றுதல்
கழிவறை உபயோகித்தல்	தானாக கழிவறைக்குச் சென்று உடைமாற்ற பிறப்புருப்பை சுத்தம் செய்தல்.	பிறர் உதவியுடன் கழிவறைக்குச் செல்லுதல்	பிறர் உதவியுடன் கழிவறைக்குச் செல்லுதல் மற்றும் சுத்தம் செய்தல்.
அசைதல்	தானாக படுக்கையிலிருந்து எழுவது, இருக்கை யில் அமருதல் சில நேரங்களில் இயந்திர உதவியை பயன்படுத்துதல்	பிறர் உதவியுடன் படுக்கை மற்றும் இருக்கையிலிருந்து நகருதல்	பிறர் உதவியுடன் முழுமையாக இடம் விட்டு இடம் நகருதல்
சிறுநீர் மற்றும் மலம் கழித்தலில் கட்டுப்பாடு	சிறுநீர் மற்றும் மலம் கழித்தலில் முழு சுயக் கட்டுப்பாடு	சிறுநீர் மற்றும் மலம் கழித்தலில் பாதி கட்டுப்பாடு	முழுமையாக சுயக் கட்டுப்பாடு இழத்தல்
உணவருந்துதல்	பிறர் செய்த உணவை தானாக மற்றொருவர் துணை யில்லாமல் உணவு அருந்துதல்	பிறர் உதவியுடன் உணவு அருந்துதல்	முழுமையாக பிறர் உதவியுடன் உணவு அருந்துதல்

பகுதி : 3
திருத்தப்பட்ட வாழ்க்கைத்தர வினாத்தாள்

		0	1	2	3	4
குடும்பம் மற்றும் நண்பர்கள்	எனக்கு முக்கியமான விஷயங்களைப் பற்றி பேச நபர்கள் இருக்கிறார்கள்	கிட்டதட்ட இல்லை	அபூர்வமாக	சில நேரத்தில்	அடிக்கடி	எப்போதும்
	நான் பாசம் கொடுக்கவும் பெறவும் செய்கிறேன்	கிட்டதட்ட இல்லை	அபூர்வமாக	சில நேரத்தில்	அடிக்கடி	எப்போதும்
செயல்பாடுகள்	நான் ஒரு நாளைக்கு குறைந்தது 30 நிமிடம் தீவிரமாக செயல்படுகிறேன் (உதாரணமாக ஓடுதல், சைக்கிள் ஓட்டுதல்)	எப்போதும் இல்லை	1-2 முறை வாரத்திற்கு	3 முறை வாரத்திற்கு	4 முறை வாரத்திற்கு	5 முறை அல்லது அதற்கு மேல்
	நான் மிதமான செயல்பாடுகளை செய்கிறேன் (தோட்ட வேலை, மாடிப்படி ஏறுதல், நடை பயிற்சி, வீட்டு வேலை)	எப்போதும் இல்லை	1-2 முறை வாரத்திற்கு	3 முறை வாரத்திற்கு	4 முறை வாரத்திற்கு	5 முறை அல்லது அதற்கு மேல்
ஊட்டச்சத்து	நூான் சமச்சீரான உணவு சாப்பிடுகிறேன்	கிட்டதட்ட இல்லை	அபூர்வமாக	சில நேரத்தில்	அடிக்கடி	எப்போதும்
	நான் எனது ஆரோக்கியமான உடல் எடையில் -------- கிலோவுக்குள் இருக்கிறேன்	10 கிலோ	8 கிலோ	6 கிலோ	4 கிலோ	2 கிலோ
புகையிலை நச்சு	நான் புகையிலையை புகைக்கிறேன்	வாரத்திற்கு 10 முறைக்கு மேல்	வாரத்திற்கு 1-10 முறை வரை	கடந்த 6 மாதத்தில் எப்போதும் இல்லை	கடந்த வருடத்தில் எப்போதும் இல்லை	கடந்த 5 வருடத்தில் எப்போதும் இல்லை
	நான் மார்ஜுவானா, கோகேயின் போன்ற போதை பொருட்களை பயன்படுத்துகிறேன்	எப்போதாவது				எப்போதும் இல்லை

	மருத்துவரின் பரிந்துரையில்லாத மருந்துகள் அல்லது மருத்துவர் பரிந்துரை செய்த மருந்துகளை அதிகமாக உபயோகிப்பேன்	கிட்டதட்ட தினசரி	அடிக்கடி	எப்போதாவது மட்டுமே	கிட்டதட்ட இல்லை	இல்லை
	நான் கா.்பின் அடங்கியுள்ள காபி, டீ அல்லது கோலா குடிப்பேன்	ஒரு நாளைக்கு 10 முறைக்கு மேல்	ஒரு நாளைக்கு 7-10 முறைக்கு மேல்	ஒரு நாளைக்கு 3-6 முறைக்கு மேல்	ஒரு நாளைக்கு 1-2 முறைக்கு மேல்	எப்போதும் இல்லை
மதுபானம்	என் சராசரி மதுபானம் உட்கொள்ளும் அளவு ஒரு வாரத்திற்கு	20க்கும் மேற்பட்ட பானங்கள்	13-20 பானங்கள்	11-20 பானங்கள்	8-10 பானங்கள்	0-7 பானங்கள்
	நான் ஒரு நேரத்தில் 4 க்கும் மேற்பட்ட பானங்கள் குடிப்பேன்	கிட்டதட்ட தினசரி	அடிக்கடி	எப்போதாவது மட்டுமே	கிட்டதட்ட இல்லை	இல்லை
	நான் மதுபானம் அருந்தியப்பின் வாகனம் ஓட்டுவேன்	எப்போதாவது				எப்போதும் இல்லை
தூக்கம், மன அழுத்தம், பாதுகாப்பான உடலுறவு	நான் இரவில் நன்றாக தூங்கி இளைபாறுகிறேன்	கிட்டதட்ட இல்லை	அபூர்வமாக	சில நேரத்தில்	மிகவும் அடிக்கடி	எப்போதும்
	நன்றாக மதிய நேரத்தில தூங்க முடிகிறது	இல்லை	அபூர்வமாக	சில நேரம்	பெரும்பாலான நேரம்	எப்போதும்
	என்னால் வாழ்க்கையில் அழுத்தங்களை சமாளிக்க முடிகிறது	கிட்டதட்ட இல்லை	அபூர்வமாக	சில நேரம்	மிகவும் அடிக்கடி	எப்போதும்
	என்னால் ஓய்வு நேரத்தை நிதானமாக அனுபவிக்க முடியும்	கிட்டதட்ட இல்லை	அபூர்வமாக	சில நேரம்	மிகவும் அடிக்கடி	எப்போதும்
	நான் பாதுகாப்பான உடலுறவு கொள்கிறேன்	கிட்டதட்ட இல்லை	அபூர்வமாக	சில நேரம்	மிகவும் அடிக்கடி	எப்போதும்
நடவடிக்கை	நான் அவசரமாக	எப்போதும்	மிகவும்	சில நேரம்	அபூர்வமாக	கிட்டதட்ட

வகைகள்	வேலைகளை செய்வேன்		அடிக்கடி			இல்லை
	நான் கோபத்தில் உள்ளேன்	எப்போதும்	மிகவும் அடிக்கடி	சில நேரம்	அபூர்வமாக	கிட்டதட்ட இல்லை
உட்பார்வை	நான் ஒரு நேர்முறையான அல்லது நம்பிக்கையான சிந்தனையாளர்	கிட்டதட்ட இல்லை	அபூர்வமாக	சில நேரம்	மிகவும் அடிக்கடி	எப்போதும்
	நான் பதற்றமாக உணருகிறேன் நான் சோகமாக அல்லது மன அழுத்தம், உள்ளது போல் உணருகிறேன்	எப் போதும் எப்போதும்	மிகவும் அடிக்கடி மிகவும் அடிக்கடி	சில நேரம் சில நேரம்	அபூர்வமாக அபூர்வமாக	கிட்டதட்ட இல்லை கிட்டதட்ட இல்லை
தொழில்	நான் எனது வேலையில் அல்லது பங்கில் திருப்தியாக உள்ளேம்	கிட்டதட்ட இல்லை	அபூர்வமாக	சில நேரம்	மிகவும் அடிக்கடி	எப்போதும்

பகுதி : 4
கட்டமைக்கப்பட்ட அறிவு கேள்விதாள்

1. இதயத்தின் செயல்பாடு என்ன ?
அ) பிராண வாயுவை எடுத்துச் செல்வது
ஆ) இரதத்தை சுத்திகரித்தல்
இ) உடலின் அனைத்து பகுதிகளுக்கும் இரத்தம் விநியோகித்தல்
ஈ) இரத்த அழுத்தத்தை பராமரித்தல்

2. இதய தமனியின் செயல்பாடு என்ன ?
அ) இதயத்திற்கு இரத்தம் விநியோகித்தல்
ஆ) உடலின் அனைத்து பகுதிகளுக்கும் இரத்தம் விநியோகித்தல்
இ) கொழுப்பு சேமித்து வைத்தல்
ஈ) இரதத்தை சேகரித்தல்

3. இதய தமனியில் அடைப்பு ஏற்பட்டால் என்ன விளைவுகள் உண்டாகும் ?
அ) பக்கவாதம்
ஆ) இரைப்பை எரிச்சல்
இ) மாரடைப்பு
ஈ) சிறுநீரக செயலிழப்பு

4. இதய தமனியில் அடைப்பு ஏற்படுவதற்கான காரணங்கள் என்ன ?
அ) உயர் இரத்த அழுத்தம்
ஆ) இரத்தக்குழாயில் கொழுப்பு படிதல்
இ) நீரிழிவு நோய்
ஈ) உடல் பருமன்

5. நீங்கள் மாரடைப்பு என்றால் என்னவென்று புரிந்துக்கொண்டீர்கள்?
அ) நெஞ்சு வலி
ஆ) ஒரு வால்வு செயலிலப்பு
இ) இதயத்தின் செயல்பாட்டில் மாறுதல்
ஈ) இதய தசை மரணம்

6. கீழ்காணும் மாரடைப்பை ஏற்படுத்தும் நடைமுறை வாழ்க்கை பழக்க வழக்கத்தில் உள்ள காரணிகளில் எந்த ஆபத்து காரணியை தவிர்க்கலாம்?
அ) நீரிழிவு நோய்
ஆ) உயர் இரத்த அழுத்தம்
இ) புகைப்பழக்கம்
ஈ) சிறுவயதிலேயே மாதவிடாய் நிறுத்தம்

7. மாரடைப்பின் சிகிச்சை அளித்து சரி செய்யக்கூடிய ஆபத்து காரணி எது?
அ) நீரிழிவு நோய்
ஆ) குறைவான ஊட்டச்சத்து
இ) உடல் பருமன்
ஈ) குறிப்பிட்ட இனம்

8. பின்வரும் ஆபத்து காரணிகளில் எது மாற்ற முடியாதது?
அ) உடற்பயிற்சி இல்லாமை
ஆ) குடும்பத்தில் மாரடைப்பு ஏற்பட்டிருத்தல்
இ) உடல் பருமன்
ஈ) மன அழுத்தம்,

9. மாரடைப்பிற்குப் பின் எந்த வகையான உணவை மிதமான அளவில் எடுக்க வேண்டும்?
அ) நார்சத்து
ஆ) புரதச்சத்து
இ) மாவுச்சத்து
ஈ) பாலில் தயாரிக்கப்படும் பொருட்கள்

10. எந்த ஊட்டச்சத்து மாரடைப்பு ஏற்படுவதை தடுக்கிறது?
அ) மாவுச்சத்து
ஆ) புரதச்சத்து
இ) ஓமேகா -3 கொழுப்பு அமிலங்கள்
ஈ) வைட்டமின்கள்

11. எந்த வகையான இரத்தக் கொழுப்பு மாரடைப்பின் ஆபத்தை குறைக்கிறது
அ) குறைந்த அடர்த்தி கொழுப்பு புரதம்
ஆ) உயர் அடர்த்தி கொழுப்பு புரதம்
இ) கொழுப்பு
ஈ) டிரைகிளிசரைடுகள்

12. மாரடைப்பு ஏற்பட்ட முதல் 6 வாரங்களுக்குப் பிறகு கீழே குறிப்பிட்டிருக்கும் வேலைகளில் எது அனுமதிக்கப்படுகிறது?
அ) அதிக பளு துக்கும் பயிற்சி
ஆ) படி ஏறுதல்,
இ) வாகனம் ஓட்டுதல்
ஈ) நீச்சல்

13. கீழ் காணும் அறிக்கைகளில் உடற்பயிற்சி மற்றும் மாரடைப்பை பற்றிய சரியான அறிக்கை எது ?
அ) அதிகமான உடற்பயிற்சி இதயதசையை வலுவிழக்க செய்யலாம்
ஆ) உட்கார்ந்து பணியாற்றும் வாழ்க்கை முறை மாரடைப்பு ஏற்படுவதை தவிர்க்கும்
இ) வழக்கமான உடற்பயிற்சி மாரடைப்பை தடுக்கும்
ஈ) உடற்பயிற்சிக்கும் மாரடைப்பைக்கும் எந்த தொடர்பும் இல்லை

14. எந்த உடற்பயிற்சி இதய வலிமையை பராமரிக்கிறது
அ) சரிசம உடற்பயிற்சி
ஆ) ஏரோபிக் உடற்பயிற்சி
இ) பலப்படுத்துதல் உடற்பயிற்சி
ஈ) காற்று புகா உடற்பயிற்சி

15. உடற்பயிற்சியின் போது எந்த அறிகுறிகள் ஏற்பட்டால் உடற்பயிற்சியை உடனே நிறுத்த வேண்டும்?
அ) அதிக இதயதுடிப்பு
ஆ) அதிக சோர்வு
இ) மயக்க உணர்வு
ஈ) மேற்கூறிய அனைத்தும்

16. வாகனம் ஓட்டும் போது நெஞ்சு வலி ஏற்பட்டால் நீங்கள் என்ன செய்யவீர்கள்?
அ) அருகில் உள்ள மருத்துவமனைக்கு ஓட்டி செல்லவும்
ஆ) வீட்டிற்கு செல்லவும்
இ) வண்டியை நிறுத்தி, ஒரு நைட்ரோகிளிசரின் மாத்திரையை உட்கொண்டு உதவி கேட்கவும்
ஈ) வண்டியை நிறுத்தி விட்டு கீழே படுக்கவும்

17. முன்று நைட்ரோகிளிசரின் மாத்திரைகள் ஐந்து நிமிட இடைவெளியில் உட்கொண்டபின் மார்பு அசௌகரியம் சரியாகவில்லை என்றால் என்ன செய்ய வேண்டும்?
அ) அசௌகரியம் சரியாகும் வரை படுத்துக் கொள்ளவும்
ஆ) மற்றொரு நைட்ரோகிளிசரின் மாத்திரையை உட்கொண்டு மற்றொரு ஐந்து நிமிடம் காத்திருக்கவும்
இ) 108 டயல் செய்யவும் அல்லது உடனடியாக அவசரகால மருத்துவ சேவையை தொடர்பு கொள்ளவும்
ஈ) காலை வரை காத்திருந்து உங்களுக்கு எப்படி இருக்கிறது என்று பார்க்கவும்

18. கீழ் காணும் அறிக்கைகளில் தூக்கம் மற்றும் மாரடைப்பை பற்றிய சரியான அறிக்கை எது?
அ) நல்ல தூக்கம் மாரடைப்பின் ஆபத்தை குறைக்கிறது
ஆ) தூக்கம் மாரடைப்பை பாதிக்காது
இ) நல்ல தூக்கம் மாரடைப்பின் ஆபத்தை அதிகரிக்கும்
ஈ) தூக்கத்திற்கும் மாரடைப்பிற்கும் சம்பந்தம் இல்லை

19. ஆரோக்கியமான இதயத்தை பராமரிக்க நீங்கள் எத்தனை மணி நேரம் இரவில் தூங்க வேண்டும்?
அ) 6 மணி நேரம்
ஆ) 7 மணி நேரம்
இ) 8 மணி நேரம்
ஈ) 9 மணி நேரம்

20. தினமும் உங்களுக்கு தூக்கமின்மை ஏற்பட்டால் உங்களுக்கு என்ன ஏற்படலாம்?
அ) தலைவலி
ஆ) இரைப்பை எரிச்சல்
இ) இரத்தக்குழாயில் கொழுப்பு படிதல்
ஈ) உடல் வலி

21. மாரடைப்பின் பின்னர் பாலியல் உறவு பாதுகாப்பானதா?
அ) தடை பண்ணப்பட்டது
ஆ) மருத்துவரின் ஆலோசனைக்கு பிறகு
இ) வாழ்க்கை துணையின் அனுமதி பெற்ற பின்
ஈ) இந்த வயதில் அவசியம் இல்லை

22. மன அழுத்தத்தினால் இதயத்தில் ஏற்படும் விளைவு என்ன?
அ) உயர் இரத்த அழுத்தம்
ஆ) தமனிகள் பாதிப்படைதல்
இ) உயர் கொழுப்பு நிலை
ஈ) மேற்கூறிய அனைத்தும்

23. உங்கள் அனுதின வாழ்க்கையில் மன அழுத்தத்தை எப்படி குறைக்கலாம்?
அ) தளர்ச்சி உடற்பயிற்சிகள்
ஆ) ஆழ்ந்து சுவாசித்தல்
இ) கவன படங்கள்
ஈ) மேற்கூறிய அனைத்தும்

24. புகைபிடித்தல் மாரடைப்பு ஏற்படுவதற்கு எவ்வாறு பங்களிக்கிறது?
அ) உள்ளிளுக்கும் புகையில் உள்ள நிக்கோட்டின் இரத்த நாளங்களின் அளவை குறைக்கிறது
ஆ) சிகரெட்டின் புகை இதய துடிப்பை குறைக்கிறது
இ) சிகரெட்டின் புகைத்தல் உங்கள் இதயத்தை அல்ல நுரையீரலை தான் பாதிக்கிறது
ஈ) சிகரெட்டின் புகைத்தல் உங்கள் முதல் மாரடைப்பிற்கு பின்னர் குறைந்த ஆபத்தானது

25. இரண்டாம் நிலை புகைபிடித்தல் இதயத்தை எவ்வாறு பாதிக்கிறது?
அ) இரத்த உறைதலை அதிகரிக்கிறது
ஆ) கெட்ட கொழுப்பு சத்தை அதிகரித்து இரத்த நாளத்தில் கொழுப்பை படியச்செய்கிறது
இ) செல் சேதத்தை உருவாக்கும் காரணிகளை அதிகப் படுத்துகிறது
ஈ) மேற்கூறிய அனைத்தும்

APPENDIX-D1

INTERVENTION IN ENGLISH

INDIVIDUALIZED EDUCATION ON LIFESTYLE MODIFICATION AFTER MYOCARDIAL INFARCTION

TOPIC	: Lifestyle modification
GROUP	: Post myocardial infarction patients
PLACE	: Cardiac wards of GKNM Hospital, Coimbatore
METHOD OF TEACHING	: Lecture cum discussion
TEACHING AIDS	: Powerpoint slides
EDUCATOR	:Ms.Jessy Sanjeevini.R

INTRODUCTION

Coronary artery disease is the leading cause of disease and death in India. Lifestyle modification can cause considerable changes in improving the quality of life after an attack. I Ms. Jessy Sanjeevini will teach you about the disease process of myocardial infarction and the lifestyle practices one has to adopt to protect the heart and lead a healthy life.

DEFINITION OF MYOCARDIAL INFARCTION

A heart attack or acute myocardial infarction (MI) occurs when there is reduced blood flow in a coronary artery due to rupture of an atherosclerotic plaque & subsequent occlusion of the artery by a thrombus.

CAUSES OF MYOCARDIAL INFARCTION

1. Thrombosis -Blood clot

The most common cause of an MI is a blood clot that forms inside a coronary artery, or one of its branches. This blocks the blood flow to a part of the heart.

2. Atherosclerosis

Atheroma is a fatty patch that develops within the lining of arteries. Plaques of atheroma develop gradually from childhood in one or more places in the coronary arteries. When a crack develops in the outer part of the atheroma, the plaque ruptures and can trigger the clotting mechanism to form a blood clot.

RISK FACTORS OF MYOCARDIAL INFARCTION

MI most commonly occurs in people aged over 50 and with increasing age incidence increases. Sometimes younger people are also affected.

The associated risk factors are as follows:-

✦ Lifestyle risk factors that can be prevented or changed

- An unhealthy diet practice.
- Lack of physical activity.
- Inadequate sleep.
- Obesity.
- Stress.
- Smoking.
- Excess alcohol.

✦ Treatable or partly treatable risk factors

- Hypertension (high blood pressure).
- High cholesterol blood level.
- High triglyceride (fat) blood level.
- Diabetes.
- Kidney diseases.

✦ Fixed risk factors - that cannot be altered

- A strong family history.
- Being male.
- An early menopause in women.
- Older age.
- Ethnic group.

ESSENTIAL LIFESTYLE MODIFICATION FOR RISK REDUCTION

Lifestyle risk factors which can be prevented through lifestyle modification are as follows.

DIET

The diet should be of low fat, moderate protein, low salt diet which is upto1600 kcal.

The diet should contain balanced nutrients from each of the following food groups:

1. Starchy foods (complex carbohydrates)

- Starchy foods contain lot of fibre and minerals. The essential carbohydrate intake for one day is 520 kilocalories

2. Fruit and vegetables

It is recommended to eat at least 5 portions of a variety of fruit or vegetables each day.

One portion of fruit or vegetables is roughly equivalent to one of the following:

- One large fruit: An apple, pear, banana, orange, or a large slice of pineapple.
- Two smaller fruits: plums, kiwis, peach, etc.
- One cup of small fruits: grapes, strawberries, raspberries, cherries.
- Two large tablespoons of fruit salad stewed or canned fruit in natural juices.
- One tablespoon of dried fruit.
- One glass of fresh fruit juice (150 ml).
- One bowl of salad.

3. Fibre

- Fibre is the part of food that enhances digestion and helps the bowels to move regularly, it reduces constipation and other bowel problems.
- Fibre rich foods include starchy foods, fruit and vegetables, pulses like lentils and beans, wholemeal rice, and wholemeal flour.
- Take at least 25 g of fibre daily and 6-8 cups of fluid a day when you eat a high-fibre diet.

4. Milk and dairy foods

Milk and other dairy foods such as cheese and yoghurt are important in your diet as they provide the needed calcium. Take 3 servings per day

One serving is:

- 200 ml of skimmed or semi-skimmed milk .
- A small pot of low fat yogurt.

5. Protein foods

- Protein is necessary for energy and growth and for repair in the body.
- It should be taken in moderation.
- High-protein foods are also source of iron and vitamins.
- Daily protein intake should be one gram per kg body weight.

In proteins,

- Choose poultry such as chicken or lean meat.
- Boil or poached eggs.
- 3 tablespoons of beans or pulses such as chickpeas

Omega-3 fatty acids

- Eating oily fish helps to protect against heart disease.
- The omega-3 fatty acids in the fish oil help to reduce the build-up of atheroma.
- Aim to eat at least two portions of fish per week, one of which should be oily. Oily fish include: herring, sardines, mackerel, salmon.

6. Fatty foods

- A low-fat diet helps keep a healthy weight and prevent MI.
- Avoid saturated fats and oils such as groundnut oil, coconut oil and palm oil.
- Consume unsaturated fats such as sunflower oil, safflower oil, mustard oil, rice bran oil, corn oil, olive oil.
- Avoid fried foods, egg yolk, meat, cake, butter and ice creams.

7. Avoid sugary foods and drinks

Sugary foods and drinks are high in calories, and too much may cause weight gain:

- Try to add less sugar to tea, coffee, and breakfast cereals.
- Reduce sugar in any kind of recipe. Use fruit as an alternative to add sweetness to recipes.
- Try sugar-free drinks and eat chocolate or sweets as part of a meal in very less amount.

8. Reduce salt intake.

- Lowering salt intake can reduce the risk of another MI and also other cardiovascular diseases.
- Take only a minimum of 6 g of salt daily.

PHYSICAL ACTIVITY AND EXERCISE

- Physical activity and regular exercise are good for the heart. It reduces the risk of having a further MI.
- After MI it is best to build up the level of activity and exercise gradually.
- Aerobic exercise maintains cardiovascular fitness.
- It is important to exercise at least 5 days in a week.
- **Examples of activities that are allowed**
  - Lifting weight up to 12 kgs
  - Stair climbing up to 12 steps
  - Social activities like going to church, social events
  - Walking
  - Light household activities
- **Examples of activities that are not allowed**
  - Driving can be resumed after six weeks after MI, but this should be cleared with the consultant.
  - Heavy household works.
  - Sexual activity-after consulting with the doctor.
  - Work which demands more physical demands.
  - Sports and recreational activities.
- **Below are guidelines for an exercise program to follow**
  - Week one post discharge: Aim to walk for five minutes each day. If it's possible, you can do two five minute walks in this one day before increasing the walking time.
  - Week Two: Aim to walk for 10 minutes non-stop each day, as it becomes easier, you may increase the time by a minute or two.
  - Week Three: Aim to walk for 15-20 minutes non-stop each day.
  - Week Four: Aim to walk for 20-25 minutes non-stop each day.
  - Week Five: Aim to walk for 25-30 minutes non-stop each day.
  - Week Six: Aim to walk for 30-40 minutes non-stop each day.
  - After week six you can progress your walking as tolerated.

- **Tips to gauge what level of exercise is the correct level for you.**
  - When you are walking you should be able to talk but not sing.
  - You should feel slightly to moderately breathless immediately post exercise, and you should recover from this breathlessness after a short rest
  - You should not feel so tired after your walk that you need to go to bed to recover. You may need to take a daily nap in the weeks following your MI, which is normal, but should not be related to your walking.
- You should stop exercise if you experience any of the following:
  - Dizziness
  - Palpitations
  - Chest discomfort
  - Sickness
  - Cramps
  - Extreme fatigue
- **What to do if you experience angina (chest pressure/discomfort)**
  - STOP what you are doing and rest or sit down.
  - Put one nitroglycerin tablet under your tongue and wait five minutes.
  - If the discomfort is not completely gone, take a second nitroglycerin tablet and wait five additional minutes.
  - If the discomfort is not completely gone after two tablets, take a third (and final) nitroglycerin tablet and wait five more minutes.
  - If after 15 minutes and three nitroglycerin tablets the discomfort remains, call 108 immediately to be transported to the nearest hospital. Do not delay medical treatment by waiting to see if the discomfort will go away on its own.
- After about 6-8 weeks, the aim is to build up to at least 20-30 minutes of moderate exercise on most days (at least five days per week). This exercise should make you slightly short of breath.

CHOLESTEROL

- ❖ Cholesterol is involved in the formation of atheroma.
- ❖ Maintain cholesterol level and triglyceride level within normal limits (100-200 mg/dl).
- ❖ High-density lipoprotein (HDL)- good cholesterol should be upto 40 mg/dl in men and 50 mg/dl in women. The higher the HDL levels the lower the risk of heart disease. Exercise, smoking cessation and weight reduction increases HDL levels.
- ❖ Low-density lipoprotein (LDL)-bad cholesterol should be up to 129 mg/dl.

WEIGHT

- ❖ Weight should be based on your normal body mass index (BMI) which is 18.5-24.9. BMI of 25-29 is considered overweight and more than 30 as obesity.
- ❖ The BMI is calculated as follows:

$$\frac{\text{Weight in kgs}}{(\text{Height in meters})^2}$$

BLOOD PRESSURE

- ❖ Blood pressure (BP) is the force of blood pushing up against the blood vessel walls. The higher the pressure the harder the heart has to pump. Normal adult BP is 140/90 mm of Hg.
- ❖ Hypertension, also referred to as high blood pressure, is a condition in which the arteries have persistently elevated blood pressure.
- ❖ The target after a MI is to reduce blood pressure to below 130/80 mm Hg.
- ❖ Lifestyle factors such as eating a healthy diet, exercise, losing weight if you are overweight and eating less salt can help to lower blood pressure

DIABETES

- Diabetes mellitus, or simply diabetes, is a group of metabolic diseases in which a person has high blood sugar, either because the pancreas does not produce enough insulin, or because cells do not respond to the insulin that is produced.

- The normal fasting blood sugar should be 80-125 mg/dl and random blood sugar should be less than 140 mg/dl.Hba1c should be less than 6.0. Monitor your blood sugar periodically and consult your physician..

- Good control of your blood sugar level will help to reduce the risk of a further MI. Regular intake of diabetic medication, diabetic diet, foot care and regular exercise are very important in diabetes.

- Diabetes doubles the risk of cardiovascular disease. The main "macrovascular" diseases (related to atherosclerosis of larger arteries) are coronary artery disease (angina and myocardial infarction), stroke, and peripheral vascular disease.

- Micro vascular complications include, diabetic retinopathy, diabetic nephropathy, diabetic neuropathy which causes diabetic foot ulcers.

SLEEP

- Inadequate sleep may cause cardiovascular disease.

- A minimum of 7 hours of sleep is necessary at night and avoid day time naps

- Poor sleep has been linked to high blood pressure, atherosclerosis, heart attack, stroke**,** diabetes, and obesity**.**

- Poor sleep also causes the body to produce more stress hormones, which may contribute to cardiovascular disease.

- Having a regular rest and sleep will help to improve your cardiovascular health.

STRESS

- Stress is defined as a condition that results when a threat or challenge to ones well being requires a person to adjust.

- Unmanaged stress, can affect the health by causing

  - High blood pressure
  - Irregular heart rhythms
  - Damage to the arteries.
  - Higher cholesterol levels
  - A weakened immune system.
  - The development and progression of coronary artery disease (atherosclerosis)

- How to manage stress: To gain control over your stress and lead a more healthy, balanced and productive life, the following activities are essential.

  - Relaxation Exercises- Breathe in slowly for 3 sec and tense each specific muscle groups from foot to head and count up to 10 then relax them fully as you breathe out. Repeat it 3-4 times.
  - Deep breathing- Lie down in a comfortable position.Close the mouth and inhale deeply and slowly through the nose and count up to 3, then breathe out through the nose, slowly. Repeat until the muscles are relaxed.
  - Focused imagery-Do deep breathing exercise and begin to create a paradise in the mind. Imagine you are walking on a beach or boating on the river. Think of as many details as you can – how does it look, how does it smell, feel the warmth of the sun, or hear the sounds of the ocean.Practice this image often.

SEXUAL HEALTH

❖ Resume sexual activity after consulting your physician.

❖ Stop sexual activity if the following symptoms are present

- chest pain
- abnormal shortness of breath
- fatigue
- dizziness, or palpitations.

❖ Take nitroglycerin sublingually if there is an angina attack.

❖ Less than 1% of heart attacks come from having sex.

SMOKING

❖ To quit smoking is the single most effective way to reduce the risk of further MI.

The effects include:

- The nicotine in inhaled smoke causes blood vessels to decrease in size.
- Immediate and long term raise in blood pressure and heart rate
- Constriction of blood vessels in the skin, resulting in a drop in skin temperature.
- Smoking increases LDL cholesterol levels, and reduces HDL cholesterol .
- Less oxygen is carried by the blood
- Stickier blood, which is more prone for clotting
- Damage to the lining of arteries, which is a contributing factor to atherosclerosis
- Reduced blood flow to extremities like fingers and toes
- Increased risk of stroke and heart attack due to blockages of the blood supply.

❖ **12 TIPS TO QUIT SMOKING**

1. Anticipate a cough: As the airways come back to life a worse cough may occur, but it is normal it gradually eases. Resist this and overcome the temptation to smoke.

2. Be prepared for withdrawal symptoms such as nausea (feeling sick), headaches, anxiety, irritability, craving, and just feeling awful

3. Be positive and motivate yourself

4. Calendar count**:** Mark off each successful day on a calendar to motivate yourself.

5. Don't despair if you fail**, e**xamine the reasons and overcome it.

6. Food**:** Avoid fatty and sugary items and try drinking mainly fruit juice, plenty of water and sugar-free gum as appetite may increase after quitting.

7. Get rid of ashtrays, lighters, and all cigarettes

8. List out the reason to quit**,** its ill effects and benefits and refer every time when you are tempted

9. Resist situation that stimulate smoking. During the first week of smoking cessation change your routine

10. Set a date for stopping, and stop completely

11. Stop smoking clinicscan help and advise on the use of nicotine replacement therapy (nicotine gum, sprays, patches, tablets, lozenges and inhalers) or other treatments which can help you to stop smoking.

12. Tell everyone that you are giving up smoking**.** Friends and family may give support and help you.

❖ **Passive smoking** or **second-hand smoke**, is the inhalation of smoke by persons other than the intended "active" smoke. It causes increases blood clotting ability,builds up bad cholesterol leading to atherosclerosis,increases source of cell damaging free radicals.

ALCOHOL

- Avoid alcohol and **choose healthier non-alcoholic drinks** like lemon water.
- **Keep alcohol within the recommended limits.** Drinking above the recommended limits can lead to serious problems.
- **Men** should drink not more than 21 units of alcohol per week, no more than four units in any one day, and have at least two alcohol-free days a week.
- **Women** should drink not more than 14 units of alcohol per week, no more than three units in any one day, and have at least two alcohol-free days a week

CONCLUSION

Following all these lifestyle modification will definitely help you to have a comfortable lifestyle.

APPENDIX D2
INTERVENTION IN TAMIL

மாரடைப்பு ஏற்பட்ட பின் வாழ்க்கைமுறை மாறுபாடுகள் பற்றிய தனிப்பட்ட கல்வி

தலைப்பு	: வாழ்க்கை முறை மாறுபாடுகள்
குழு	: மாரடைப்பு ஏற்பட்ட நோயாளிகள்
இடம்	: இதய நோயாளிகள் வார்டுகள், ஜி.கே.என்.எம். மருத்துவமணை, கோயமுத்தூர்.
கற்பிக்கும் முறை	: வாசிப்பு மற்றும் கலந்துரையாடல்
கற்பிக்க	
பயன்படுத்தும் சாதனங்கள்	: கணிணி மூலம் விளக்கக் காட்சி

முன்னுரை

இதய தமனி நோய் இந்தியாவில் நோய் மற்றும் இறப்புக்கு முக்கிய காரணமாக உள்ளது. வாழ்க்கை முறை மாற்றங்கள் மாரடைப்புக்கு பின்னர் வாழ்க்கை தரத்தை மேம்படுத்த கணிசமான மாற்றங்களை ஏற்படுத்தும் எனது பெயர் செல்வி. ஜெசி சஞ்சீவினி. நான் இப்போது மாரடைப்பு நோய் செயல்பாடு மற்றும் இதயத்தை பாதுகாக்க பின்பற்ற வேண்டிய ஆரோக்கியமான வாழ்க்கை முறை பற்றி கற்பிக்க உள்ளேன்.

மாரடைப்பு – வரையரை

மாரடைப்பு என்பது இதய தமனியில் இருக்கும் கொழுப்பு கட்டி சிதைந்து அதனை தொடர்ந்து தமனியில் இரத்தக்கட்டி அடைப்பு ஏற்பட்டு அதனால் இதயதமனியில் இரத்த ஓட்டம் குறைந்து விடும்.

மாரடைப்பு ஏற்பட காரணங்கள்

1. இரத்தக் கட்டி

மாரடைப்பு ஏற்பட பொதுவான காரணம் இதய தமனி மற்றும் அதன் கிளைகளில் இரத்தக்கட்டி உருவாகுதல் இதனால் இதயத்தின் இரத்த ஓட்டம் தடைசெய்யப்படுகிறது.

2. தமனியின் தடிப்பு

தமனி தடிப்பு என்பது இதய தமனியின் உள்புறத்தில் கொழுப்பு தட்டு படிதல் ஆகும். தமனி தடிப்பு சிறுவயதிலிருந்தே இதய தமனியின் ஒன்று அல்லது அதற்கு மேற்பட்ட இடங்களில் ஏற்படுகிறது. அந்த தடிப்பில் விரிசல் ஏற்படும்போது கொழுப்பு தட்டு சிதைவு ஏற்படுகிறது. இதனால் இரத்தம் உறையும் செயல்முறை தூண்டப்படுகிறது.

மாரடைப்பின் ஆபத்து காரணிகள்

மாரடைப்பு பொதுவாக 50 வயதுக்கு மேற்பட்டவர்களுக்கு ஏற்படுகிறது மற்றும் வயது அதிகரிக்க அதிகரிக்க நோய் ஏற்படும் வாய்ப்பும் அதிகரிக்கிறது. இளவயதினர் கூட சிலவேளை பாதிக்கப்படுகிறார்கள்.

தொடர்புடைய ஆபத்துகாரணிகள் பின்வறுமாறு:-

- **தடுக்க கூடிய மற்றும் மாற்றக்கூடிய வாழ்க்கை பழக்கவழக்கத்தில் உள்ள ஆபத்துகாரணிகள்**

  - ஆரோக்கியமற்ற உணவு பழக்கம்.
  - உடல் செயல்பாடு இல்லாமை
  - குறைவான தூக்கம்
  - உடல் பருமன்
  - மன அழுத்தம்
  - புகை பிடித்தல்
  - அதிக மது அருந்துதல்

- **சிகிச்சை அளிக்கப்படக் கூடிய அல்லது பகுதி சிகிச்சையளிக்கப்பட கூடிய ஆபத்து காரணிகள்**
  - உயர் இரத்த அழுத்தம்
  - இரத்தத்தில் அதிக அளவு கொழுப்பு
  - இரத்தத்தில் அதிக அளவு டிரைகிளிசரைடு
  - சர்க்கரை நோய்
  - சிறுநீரக நோய்கள்

- **நிலையான ஆபத்துக் காரணிகள் (மாற்ற முடியாதவை)**
  - வலுவான குடும்ப வரலாறு
  - ஆண்
  - மாதவிடாய் குறித்த காலத்திற்கு முன் நின்றுபோதல்
  - முதிர் வயது
  - குறிப்பிட்ட இனம்

ஆபத்து காரணிகளைக் குறைக்கும் அவசியமான வாழ்கை முறை மாற்றங்கள்:

வாழ்கை முறையில் ஏற்படும் ஆபத்து காரணிகளை தடுப்பதற்கான வாழ்கை முறை மாற்றங்கள் பின்வருமாறு:

உணவு

1600 கிலோ கலோரி வரையிலான குறைந்த கொழுப்பு மிதமான புரதச்சத்து மற்றும் குறைந்த உப்பு உள்ள உணவு எடுத்துக்கொள்ள வேண்டும்.

சரிவிகித ஊட்டச்சத்துக்கள் கொண்டுள்ள கீழ்கண்ட உணவு வகைகளை எடுத்துக்கொள்ள வேண்டும்.

1. மாவுச்சத்துள்ள உணவுகள் (கலவையான கார்போஹைட்ரேட்டுகள்)

மாவுத்தன்மையான உணவுகளில் நார்சத்து மற்றும் தாதுப்பொருட்கள் அதிகமாக உள்ளன. ஒரு நாளைக்கான அத்தியாவசிய மாவுசத்து 520 கிலோ கலோரிகள்.

2. பழங்கள் மற்றும் காய்கறிகள்

ஒரு நாளைக்கு குறைந்தது 5 பகுதியான பழங்கள் அல்லது காய்கறிகள் சாப்பிட வேண்டும்.

ஒரு பகுதி பழம் அல்லது காய்கறி என்பது கீழ்கண்ட ஏதேனும் ஒன்றிற்கு சமானமாகும்.

- ஒரு பெரிய பழம் : ஒரு ஆப்பிள், பேரிக்காய், வாழைப்பழம், அரஞ்சுப்பழம் அல்லது அன்னாசிப்பழத்தின் பெரிய துண்டு.
- இரண்டு சிறிய பழங்கள்: பிளம்ஸ், கிவி, பீச் பழம்
- ஒரு கப் சிறிய பழங்கள்: திராட்சை, ஸ்ட்ராபெரி, ராஸ்பெரி
- இரண்டு பெரிய தேக்கரண்டி பழகலவை - இயற்கை பழச்சாற்றில் அல்லது தகரத்தில் அடைக்கப்பட்ட பழம்.
- ஒரு தேக்கரண்டி உலர்ந்த பழங்கள்.

- ஒரு குவளை புதிய பழச்சாறு (150 மி.லி.)
- ஒரு கிண்ணத்தில் சாலட்

3. நார்ச்சத்து

➢ நார்ச்சத்து என்பது செரிமான அதிகரிக்கவும், வழக்கமான குடல் இயக்கத்திற்கு உதவும் உணவின் ஒரு பகுதியாக இருக்கிறது. இது மலச்சிக்கல் மற்றும் குடல் சம்பந்தமான பிரச்சினைகளை குறைக்கிறது.

- ➢ புரதச்சத்து நிறைந்த உணவுப் பொருட்களாவன:மாவுச்சத்து நிறைந்த உணவுகள், பழங்கள் மற்றும் காய்கறிகள், அவரை மற்றும் பீன்ஸ் போன்ற பருப்பு வகைகள் முழு உணவு அரிசி மற்றும் முழு உணவு மாவு
- ➢ தினமும் குறைந்த பட்சம் 25கிராம் புரதச்சத்து உட்கொள்ள வேண்டும். மற்றும் 6 முதல் 8 கப் நீர் அதிக நார்ச்சத்து உணவுகளோடு எடுத்துக்கொள்ள வேண்டும்.

4. பால் மற்றும் பாலில் தயாரிக்கப்பட்ட உணவுப்பொருட்கள்

பாலாடைக்கட்டி மற்றும் தயிர் போன்ற உணவுகளை உணவில் சேர்த்துக்கொள்வது மிகவும் முக்கியம் ஏனென்றால் அவற்றில் உடலுக்கு தேவையான அளவு கால்சியம் உள்ளது.

ஒரு நாளைக்கு மூன்று சேவை எடுத்துக்கொள்ள வேண்டும்.

ஒரு சேவை என்பது:

- ➢ 200 மி.லி. கொழுப்பு நீக்கப்பட்ட பால் அல்லது அரை கொழுப்பு நீக்கப்பட்ட பால்
- ➢ ஒரு சிறிய குவளை அளவு குறைந்த கொழுப்புள்ள தயிர்.

5. புரதச்சத்து நிறைந்த உணவுகள்

உடல் ஆற்றல், வளர்ச்சி மற்றும் பழுதுபார்த்தலுக்கு புரதச்சத்து அவசியம். இது மிதமாக எடுத்துக்கொள்ள வேண்டும். உயர்நிலை புரத உணவுகளில் இரும்புச்சத்து மற்றும் வைட்டமின்களும் உள்ளன.

ஒரு கிலோ உடல் எடைக்கு ஒரு கிராம் புரதச்சத்து எடுத்துக் கொள்ள வேண்டும்.

புரதங்களில்

- ➢ கோழி அல்லது மெலிந்த இறைச்சி தேர்ந்தெடுக்க வேண்டும்.
- ➢ வேகவைத்த முட்டைகள்
- ➢ 3 தேக்கரண்டு பீன்ஸ் அல்லது பருப்பு வகைகளில் கொண்டை கடலை.

ஒமேகா - 3 கொழுப்பு அமிலம்

- எண்ணெய் உள்ள மீன்களை உட்கொள்வதன் மூலம் இதய நோய்களை தவிர்க்கலாம்.
- மீன் எண்ணெயில் உள்ள ஒமேகா-3 கொழுப்பு அமிலம் இதய தமனி சுவர் பாதிப்பு ஏற்படுவதை குறைக்கிறது.
- ஒரு வாரத்திற்கு குறைந்த பட்சம் இரண்டு பகுதிகள் மீன் உட்கொள்ள இலக்கு வைத்துக்கொள்ளுங்கள்.
- எண்ணெய் உள்ள மீன்கள் - ஹெர்ரிங், மத்தி மீன், கானாங்கெளுத்தி மீன், நன்னீர் மீன்.

6. கொழுப்பு நிறைந்த உணவுகள்

- குறைந்த கொழுப்பு நிறைந்த உணவுகள் ஆரோக்கியமான உடல் எடையை பராமரிப்பதற்கும் மற்றும் மாரடைப்பைத் தடுப்பதற்கும் உதவுகிறது.
- நிலக்கடலை எண்ணெய், தேங்காய் எண்ணெய் மற்றும் பனை எண்ணெய் போன்ற நிறைவுள்ள கொழுப்பு பொருட்களைத் தவிர்க்க வேண்டும்.
- செந்தூர எண்ணெய், சூரியகாந்தி எண்ணெய், கடுகு எண்ணெய், சோயா எண்ணெய், அரிசி தவிடு எண்ணெய், சோள எண்ணெய் மற்றும் ஆலிவ் எண்ணெய் போன்ற நிறைவுறா கொழுப்புள்ள உணவுப்பொருட்களை உட்கொள்ள வேண்டும்.
- பொரித்த உணவுகள், முட்டையின் மஞ்சள் கரு, இறைச்சி, கேக், வெண்ணெய் மற்றும் ஐஸ்கிரீம் போன்றவற்றைத் தவிர்க்க வேண்டும்.

7. இனிப்புப்பண்டங்கள் மற்றும் பானங்களைத் தவிர்த்தல்

- இனிப்புப் பண்டங்கள் மற்றும் பானங்களில் கலோரிகள் அதிகமாக இருக்கின்றன. இவற்றை அதிகமாக உட்கொண்டால் உடல் எடை அதிகரிக்கலாம்.
- டீ, காபி மற்றும் காலை உணவு தானியங்களில் குறைந்த அளவு சர்க்கரையை சேர்க்க முயற்சி செய் வேண்டும்.
- எந்தவகையான உணவுகளைத் தயாரிக்கும் பொழுதும் குறைந்த அளவு சர்க்கரையை உபயோகிக்க வேண்டும். சர்க்கரைக்கு பதிலாக பழவகைகளைப் பயன்படுத்தலாம்.
- சர்க்கரை இல்லாத பானங்கள் மற்றும் சாக்லேட் அல்லது இனிப்புப் பண்டங்களை உணவின் ஒரு பகுதியாக குறைந்த அளவில் எடுத்துக் கொள்ள வேண்டும்.

8. உப்பு உட்கொள்ளும் அளவை குறைத்தல்:

- உப்பு உட்கொள்ளும் அளவைக் குறைப்பது மற்றொரு மாரடைப்பையும் மற்ற இதய நோய்கள் ஏற்படுவதற்கான அபாயத்தையும் குறைக்கிறது.
- தினசரி குறைந்தபட்சம் 6கிராம் அளவு உப்பு மட்டுமே எடுத்துக்கொள்ள வேண்டும்.

உடல் செயல்பாடு மற்றும் உடற்பயிற்சி

- ❖ உடல் செயல்பாடு மற்றும் வழக்கமான உடற்பயிற்சி இதயத்திற்கு நல்லது இது மேலும் மாரடைப்பு ஏற்படுவதற்கான ஆபத்தைக் குறைக்கிறது.
- ❖ மாரடைப்பிற்கு பிறகு உடல்செயல்பாட்டின் அளவையும், உடல் பயிற்சியையும் படிப்படியாக அதிகதிப்பது நல்லது.
- ❖ ஏரோபிக் உடற்பயிற்சி இதய வலிமையைப் பராமரிக்கிறது.
- ❖ ஒரு வாரத்திற்கு 5 முறையாவது உடற்பயிற்சி செய்வது மிக முக்கியமானதாகும்.

- ❖ **அனுமதிகப்பட்ட உடல் செயல்பாடுக்கான எடுத்துக்காட்டு:**

- ➢ 12கிலோ எடை வரை (தூக்கலாம்)
- ➢ 12 படிகள் வரை படிக்கட்டு ஏறலாம்.
- ➢ சமூக நடவடிக்கைகள் மற்றும் தேவாலயம் செல்லுதல் போன்ற சமூக நிகழ்ச்சிகளில் ஈடுபடலாம்.
- ➢ நடைபயிற்சி
- ➢ லேசான வீட்டுவேலைகளை செய்யலாம்.

- ❖ **அனுமதிக்கப்படாத (செய்யக்கூடாத) உடல் செயல்பாடுக்கான எடுத்துக்காட்டு**

- ➢ மாரடைப்புக்குப்பின் 6 வாரங்களுக்குப் பிறகு வாகனங்களை ஓட்ட முடியும். ஆனாலும் இதுபற்றி மருத்துவரிடம் ஆலோசனை பெற்றுக் கொள்ள வேண்டும்.
- ➢ கடினமான வீட்டு வேலைகளை செய்யக்கூடாது.
- ➢ பாலியல் செயல்பாடு பற்றி மருத்துவரிடம் ஆலோசனை பெற்றுக்கொள்ள வேண்டும்.
- ➢ அதிக அளவு உடல் சக்தியை பயன்படுத்தக்கூடிய வேலைகள் விளையாட்டு மற்றும் பொழுதுபோக்கு நடவடிக்கைகள்.

- ❖ **உடல்பயிற்சி திட்டத்தில் பின்பற்றக்கூடிய வழிமுறைகள் கீழே கொடுக்கப்பட்டுள்ளன.**

1. டீஸ்சார்ஜ்சுக்குபின் உள்ள முதல் வாரம் : ஒவ்வொரு நாளும் 5 நிமிடம் நடைப்பயிற்சி செய்ய முயற்சிக்க வேண்டும். உங்களால் இரண்டு முறை 5 நிமிட நடைப்பயிற்சியை செய்ய முடிந்தால் உங்களது நடைபயிற்சிக்கான நேரத்தை அதிகரிக்கலாம்.
2. இரண்டாம் வாரம்: ஒவ்வொரு நாளும் தொடர்ந்து 10 நிமிடங்கள் நடைபயிற்சி செய்ய முயற்சிக்க வேண்டும். அது எளிதாக தோன்றினால் நீங்கள் நடைபயிற்சிக்கான நேரத்தின் அளவை அதிகரிக்கலாம்.
3. மூன்றாவது வாரம் : ஒவ்வொருநாளும் 15 முதல் 20 நிமிடங்கள் தொடர்ந்து நடக்க முயற்சி செய்ய வேண்டும்.

4. நான்காம் வாரம்: ஒவ்வொரு நாளும் 20 முதல் 25 நிமிடங்கள் தொடர்ந்து நடக்க முயற்ச்சி செய்ய வேண்டும்.

5. ஐந்தாம் வாரம்: ஒவ்வொரு நாளும் 25 முதல் 30 நிமிடங்கள் தொடர்ந்து நடக்க முயற்ச்சி செய்ய வேண்டும்.

6. ஆறாம் வாரம்: ஒவ்வொரு நாளும் 30 முதல் 40 நிமிடங்கள் தொடர்ந்து நடக்க முயற்ச்சி செய்ய வேண்டும்.

ஆறுவாரங்களுக்குப்பிறகு உங்களால் முடிந்த அளவிற்கான நடைபயிற்சிளை தொடரலாம்.

❖ **உங்களுக்கு தேவையான அளவு உடற்பயிற்சி எது என்பதை தெரிந்து கொள்வதற்கான வழிகள்**

- நடைபயிற்சியின் போது பேசலாம் ஆனால் பாடக்கூடாது.
- உடற்பயிற்சிக்குப் பின் உடனடியாக மிதமான மூச்சுத் திணறலை உங்களால் உணர முடியும். ஆனால் குறுகிய ஓய்வுக்குப்பின்னர் இந்த மூச்சுத்திணறலில் இருந்து நீங்கள் விடுபட வேண்டும்.
- நடைபயிற்சிக்கு பின்னர் நீங்கள் மிகவும் சோர்வாக உணரக்கூடாது. அப்படி உணர்ந்தால் சிறிதளவு ஓய்வு எடுத்துக் கொள்ளம வேண்டும். மாறடைப்பிற்கு பிறகும நீங்கள் சாதாரணமாக எடுத்து கொள்ளும் குறைவான மதிய உறக்கத்தை தொடரலாம். ஆனால் இது நடைபயிற்சிக்கு இடையூராக இருக்கக்கூடாது.

❖ பின்வருவனவற்றுள் எவையேனும் உங்களுக்கு ஏற்பட்டால் நீங்கள் உடனடியாக உடற்பயிற்சியை நிறுத்த வேண்டும்.

- தலைச்சுற்று
- படபடப்பு
- நெஞ்சில் ஏற்படும் தொந்தரவு
- நோய்
- தசைபிடிப்பு
- அதிக சோர்வு

❖ **நெஞ்சுவலி ஏற்பட்டால் என்ன செய்வீர்கள்:**

- நீங்கள் என்ன வேலை செய்து கொண்டிருந்தாலும் அதை அப்படியே நிறுத்திவிட்டு ஓய்வு எடுக்க வேண்டும். அல்லது அந்த இடத்திலேயே உட்கார்ந்து விடவேண்டும்.
- ஒரு நைட்ரோசிரின் மாத்திரையை எடுத்து நாக்கின் கீழ் வைத்து விட்டு 5 நிமிடம் காத்திருக்க வேண்டும்.
- தொந்தரவு முழுவதுமாக நீங்காவிட்டால் மேலும் ஒரு நைட்ரோகிளிசிரின் மாத்திரையை உட்கொண்டு பின்னும் ஒரு 5 நிமிடம் காத்திருக்க வேண்டும்.

- இரண்டு நைட்ரோகிளிசிரின் மாத்திரைகளை உட்கொண்ட பிறகும் தொந்தரவு முழுவதுமாக நீங்காவிட்டால், மூன்றாவது நைட்ரோசிளிசரின் மாத்திரையை உட்கொண்டு மேலும் ஒரு 5 நிமிடங்கள் காத்திருக்க வேண்டும்.

- இறுதியாக 15 நிமிடங்களுக்குபின்னும்,மூன்று நைட்ரோகிளிசிரின் மாத்திரைகளை உட்கொண்ட பிறகும் தொந்தரவு நீங்காபட்சத்தில் அவசர ஊர்தி 108 – யை தொடர்பு கொண்டு உடனடியாக அருகிலுள்ள மருத்துவமனைக்கு கொண்டு செல்ல வேண்டும். தானாகவே தொந்தரவு சரியாகிவிடும் என்று எதிர்பார்த்து மருத்துவ உதவியை பெற தாமதிக்க கூடாது.

6 முதல் 8 வாரங்களுக்குப்பின்னர், நீங்கள் மிதமான உடற்பயிற்சிளை பெரும்பாலான நாட்களில் (வாரத்திற்கு குறைந்தது 5 நாட்கள்) குறைந்தது 20 முதல் 30 நிமிடங்கள் செய்ய வேண்டும் என்பதே நோக்கமாகும். இந்த உடற்பயிற்சி உங்களுக்கு சிறிதளவு மூச்சுத்திணறலை ஏற்படுத்தும்.

கொலஸ் டீரால்:

- ❖ கொலஸ்டீரால் இரத்த தமனி சுவர் பாதிப்பு ஏற்படுவதில் பெரும் பங்கு வகிக்கிறது.
- ❖ கொலஸ்டீரால் மற்றும் டீரைகிளிசரைடு அளவுகளை இயல்பான எல்லைகளுக்குள் வைத்துக்கொள்ள வேண்டும்(100 -200 மி.கி./டெ.லி)
- ❖ உயர் அடர்த்தி கொழுப்பு புரதம் - நல்ல கொழுப்பு ஆண்டுகளுக்கு 40மிகி/டெ.லி மற்றும் பெண்களுக்கு 50மி.கி./டெ.லி வரைக்கும் இருக்க வேண்டும். உடற்பயிற்சி, புகைபிடித்தலை நிறுத்துதல் மற்றும் உடல் எடை குறைத்தல் போன்றவற்றால் உயர் அடர்த்தி கொழுப்பு புரத அளவு அதிகரிக்கிறது.
- ❖ குறைந்த அடர்த்தி கொழுப்பு புரதம் - கெட்ட கொழுப்பு அளவு 129 மிகி/டெ.லி வரைக்கும் இருக்க வேண்டும்.

உடல் எடை

- ❖ உடல் எடை சாதாரண உடல் நிறை குறியீட்டு எண் அடிப்படையில் இருக்க வேண்டும், அதாவது 18.5 முதல் 28.09.வரை உடல் நிறை குறியீட்டு எண் 25 முதல் 29 வரை இருந்தால் அதிக உடல் எடை மற்றும் 30-க்கு மேல்
- ❖ உடல் நிறை குறியீட்டு எண் பின் வருமாறு கணக்கிடப்படுகிறது.

$$\frac{\text{உடல் எடை(கி.கி)}}{(\text{உயரம் மீட்டரில்})^2}$$

இரத்த அழுத்தம்:

- ❖ இரத்த அழுத்தம் என்பது இரத்தநாளத்திற்கு எதிராக அழுத்தப்படும் இரத்தத்தின் விசை ஆகும். அழுத்தம் அதிகமாகும்போது இதயம் கடினமாக சுருங்கும் நிலை ஏற்படுகிறது. சாதாரண மனிதனின் இரத்த அழுத்தம் 140/90 மி.மீ மெர்குரி.

- உயர் இரத்த அழுத்தம் என்பது தமனிகளில் தொடர்ச்சியாக இரத்த அழுத்தம் அதிகமாக இருப்பது.
- மாரடைப்புக்கு பின்னர் உள்ள இலக்கு என்னவென்றால் இரத்த அழுத்ததை 130/80 மி.மீ மெர்குறி அளவுக்கு கீழ் குறைப்பது ஆகும்.
- இரத்த அழுத்தத்தை குறைப்பதற்கு ஆரோக்கியமான உணவு உண்ணுதல், உடற்பயிற்சி செய்தல், உடல் எடை குறைத்தல் மற்றும் குறைந்த உப்பு சாப்பிடுவது. போன்ற வாழ்க்கை முறை காரணிகள் இரத்த அழுத்தத்தை குறைக்க உதவுகிறது.

நீரிழிவு நோய்:

- நீரிழிவு நோய் என்பது வளர்சிதை மாற்ற நோய்களின் ஒரு வகை ஆகும். இதில் கணையம் போதுமான அளவு இன்சுலின் உற்பத்தி செய்யாமல் அல்லது உடலின் செயல்களின் உற்பத்திக்கு ஏற்றவாறு செயல்படாமல் இருப்பதால் இரத்தத்தில் சர்க்கரையின் அளவு அதிகமாகிறது.
- உண்ணுவதற்கு முன் இரத்த சர்க்கரையின் அளவு 80 முதல் 125மி.கி./டெ.லி வரை இருக்க வேண்டும் - ஏதாவது ஒரு நேரத்தில் இரத்த சர்க்கரையின் அளவு 140மி.கி/டெ.லி-க்கு குறைவாக இருக்க வேண்டும். கிளைகோஸைலேட்ட இரத்த சிவப்பணுவின் அளவு 6-க்கு கீழ் இருக்க வேண்டும் உங்கள் இரத்த சர்க்கரையின் அளவை அவ்வப்போது கண்காணித்து உங்கள் மருத்துவரை கலந்தாலோசிக்கவும்.
- இரத்த சர்க்கரையின் அளவை கட்டுப்பாட்டிற்குள் வைத்துக் கொண்டால் மாரடைப்பு ஏற்படும் ஆபத்தை குறைக்கலாம் - வழக்கமாக உட்கொள்ளும் நீரிழிவு நோய் மருத்துகளை உட்கொள்வது, சர்க்கரை நோய்க்கான உணவு,பாத பராமரிப்பு மற்றும் வழக்கமான உடற்பயிற்சி செய்வது மிகவும் அவசியமானது.
- நீரிழிவு நோய் இதய இரத்த நாள நோய்கள் ஏற்படுவதற்கான ஆபத்தை இரண்டு மடங்கு அதிகரிக்கிறது.
- பெரும் இரத்தநாள நோய்களாவன இதய தமணி நோய், பக்கவாதம் மற்றும் புற நாளங்களில் ஏற்படும் நோய்கள்.
- நுண்ணிய இரத்தநாள நோய்களாவன நீரிழிவு விழித்திரை நோய், நீரிழிவு சிறுநீரக நோய் மற்றும் கால் புண்கள் ஏற்படும் காரணமாகிற நீரழிவு நரம்பு கோளாறு.

தூக்கம்

- ❖ குறைவான தூக்கம் இதய இரத்தகுழாய் நோய் ஏற்பட்ட காரணமாகிறது.
- ❖ இரவில் குறைந்தது 7மணி நேர தூக்கம் அவசியம் பகல் நேர குட்டி
- ❖ தூக்கத்தை தவிர்க்க வேண்டும்.
- ❖ குறைவான தூக்கம் உயர் இரத்த அழுத்தம், இரத்த குழாயில் கொழுப்பு படிதல், மாரடைப்பு, பக்கவாரம், நீரிழிவு நோய் மற்றும் உடல்பருமன் போன்றவற்றோடு தொடர்புபடுத்தப்படுகிறது.
- ❖ வழக்கமான ஓய்வு மற்றும் தூக்கம் இதய இரத்த நாளங்களின் ஆரோக்கியத்தை மேம்படுத்துகிறது.

மன அழுத்தம்

- ❖ ஒரு நபரின் தன்னலத்திற்கு அச்சுறுத்தல் அல்லது சவால் ஏற்பட்டு அதனை சரிசெய்ய இன்னொருவரின் உதவி தேவைப்படும் நிலையே மன அழுத்தம் ஆகும்.
- ❖ நிர்வகிக்கப்படாத மன அழுத்தம் உடல் நலனை பாதிக்கும் வழிகளாவன
  - ➢ உயர் இரத்த அழுத்தம்
  - ➢ ஒழுங்கற்ற இதய சத்தம்
  - ➢ தமனிகளில் சேதம் ஏற்படுதல்
  - ➢ அதிக கொலஸ்ட்ரால் அளவு
  - ➢ இதயமணி நோய் உருவாகுதல் மற்றும் தீவிரமடைதல்
  - ➢ பலவீனமடைந்த நோய் எதிர்ப்பு மண்டலம்
- ❖ மன அழுத்தத்தை சம்மாளிப்பது எப்படி?

மன அழுத்த கட்டுப்பாட்டை பெற்று ஆரோக்கியமான மற்றும் சீரான வாழ்க்கை வாழ பின்வரும் நடவடிக்கைகள் மிகவும் அவசியமானவை ஆகும்.

- ➢ தளர்வு பயிற்சிகள் - ஆழமான மூச்சை மெதுவாக உள் இருந்து காலில் இருந்து தலைவரை ஒவ்வொரு குறிப்பிட்ட தசை குழுக்களையும் சுருக்கி அதன் பின்னர் தளர்த்தி முழுமையாக மூச்சை வெளியே விட வேண்டும்.3 முதல் 4 முறைகள் வரை திரும்பி செய்ய வேண்டும்.

- ➢ ஆழ்ந்த சுவாசம் - வசதியான நிலையில் படுத்துக்கொண்டு, வாயயை மூடி ஆழமான சுவாசக்காத்தை மெதுவாக மூச்சின் வழியாக உள்ளே எடுத்து, 1,2, மற்றும் 3 வரை எண்ணிக்கொள்ள வேண்டும், பிறகு மெதுவாக சுவாசக்காற்றை

மூக்கீன் வெளிடவிட வேண்டும். இதை தசைப்பகுதிகள் இலகுவாகும் வரைக்கும் தொடர்ந்து செய்ய வேண்டும்.

- கவனப்படங்கள் - ஆழ்ந்த சுவாசபயிற்சியை செய்துகொண்டு சொர்க்கம் போன்ற நினைவை மனதில் உருவாக்கி கொள்ள வேண்டும். கடற்கரையில் நடப்பதாகவோ அல்லது படகில் செல்வதாகவோ நினைத்துக்கொள்ளுங்கள். அவ்விடத்தின் அழகை ரசித்துக் கொண்டும், மணத்தை நுகர்ந்துகொண்டும், சூரியனின் மிதமான வெப்பத்தின் இனிமையை உணர்ந்து கொண்டும். மற்றும் கடல் அலைகளின் இனிமையான ஒசையை கேட்டுக்கொண்டும் செல்லுவதாக நினைத்துச்கொள்ளுங்கள் .அடிக்கடி இந்த விதமான நல்ல உணர்வுகள் நினைத்துக்கொள்ளுங்கள்.

பாலியல் ரீதியான ஆரோக்கியம்

- பாலியல் செயல்பாடு பற்றிய ஆலோசனையை மருத்துவரிடம் கேட்டு தெரிந்து கொள்ள வேண்டும்.
- பின்வரும் அறிகுறிகளில் நிறுத்திவிட வேண்டும்.
  - நெஞ்சு வலி
  - அசாதாரண மூச்சுத்திணறல்
  - உடல் சோர்வு
  - தலைச்சுற்று (அ) படபடப்பு
  - நெஞ்சுவலி ஏற்பட்டால் உடனடியாக நைட்ரோசினிசிரின் மாத்திரையை எடுத்து நாக்கின் கீழாக வைத்து உட்கொள்ள வேண்டும்.
- 1 சதவீதத்திறக்கும் குறைவான மாரடைப்புகள் பாலியல் செயல்பாடுகளின் மூலமே ஏற்படுகிறது.

புகைப்பிடித்தல்

- புகைப்பிடிப்பதை நிறுத்துவது, மேலும் மாரடைப்பு ஏற்படுவதை குறைப்பதற்கான மிகச் சிறந்த வழியாகும்.

- புகைப்பிடித்தலின் விளைவுகள்
  - உள்ளிளுக்கும் புகையில் உள்ள நிக்கோட்டின் இரத்த நாளங்களின் அளவை குறைக்கிறது.
  - இரத்த அழுத்தம் இதய துடிப்பில் உடனடியாக மற்றும் தொடர்ந்த அதிகரிப்பு ஏற்படும்.
  - தோல்பகுதியிலுள்ள இரத்த நாளங்கள் சுருங்குவதால் தோலின் வெப்பநிலை குறையும்.

- புகைப்பிடிப்பது குறைந்த அடர்த்தி கொழுப்பு புரதத்தின் அளவை அதிகரித்து அதிக அடர்த்தியுள்ள கொழுப்பு புரதத்தின் அளவை குறைக்கிறது.

- குறைந்த அளவு ஆக்ஸிஜனையே இரத்த நாளங்கள் எடுத்துச் செல்லும்.

- இரத்த அணுக்கள் மிகவும் ஒட்டும் தன்மையுள்ளதாக மாறுவதால் எளிதில் உறையும் தன்மையுடையதாகிறது.

- இரத்த தமனியின் சுவரில் பாதிப்பு ஏற்படுவதால் தமனித்தடிப்பு ஏற்படுவதற்கான காரணியாக அமைகிறது.

- கை கால்களில் இரத்த ஓட்டம் தடைபடுவதால் பக்கவாதம் மற்றும் மாரடைப்பு ஏற்படுதற்கான வாய்ப்புகள் அதிகரிக்கும்.

❖ புகைப்பிடிப்பதற்கான தவிர்ப்பதற்கான 12 குறிப்புகள்

1. இருமல் ஏற்படலாம்: பழுதடைந்த மூச்சுக்குழல் மீண்டும் நல்ல நிலைக்குத் திரும்பும்போது அதிகமான இருமல் ஏற்படலாம். இது சாதாரணமானது தான் இது படிப்படியாக குறைந்து விடும். இதை நீங்கள் எதிர்கொண்டு புகைபிடிக்கத்தூண்டும் உணர்வை கட்டுப்படுத்தி பழக வேண்டும்.

2. வாந்தி, குமட்டல், தலைவலி, எரிச்சல், பயம் போன்ற அறிகுறிகள் புகைபிடித்தலின் இருந்து மீளும் போது ஏற்படலாம்.

3. நீங்களே உங்களை ஊக்குவித்து நேர்மறையான எண்ணங்களை உருவாக்கி கொள்ள வேண்டும்.

4. நீங்களே உங்களை ஊக்குவித்து கொள்வதற்காக வெற்றியாக அமைந்த ஒவ்வொரு நாட்களையும் காலண்டரில் குறித்து வைத்துக் கொள்ளவும்.

5. முயற்சியில் தோல்வியுற்றால் அவநம்பிக்கை கொள்ளாமல், அதற்கான காரணத்தை ஆலோசித்துப்பார்த்து அதை தவிர்க்க வேண்டும்.

6. உணவுகள் : புகைபிடிப்பதை நிறுத்தவதால் உங்களுக்கு பசியுணர்வு அதிகரிக்கலாம். அப்போது கொழுப்பு நிறைந்த மற்றும் இனிப்பு பண்டங்களை உட்கொள்ளுவதை தவிர்த்து விட்டு அதிக தண்ணீர், பழவகைப் பானங்கள் மற்றும் சர்க்கரை இல்லாத கம்ஸ் போன்றவற்றை எடுத்துக்கொள்ளலாம்.

7. எல்லாவகையான பீடி மற்றும் சிகரெட் பிடித்தல் போன்றவைகளை விட்டுவிட வேண்டும்.

8. புகைப்பிடித்தலை நிறுவத்துவதற்கான காரணங்கள், புகைப்பிடிப்பதால் ஏற்படும் நன்மைகள் மற்றும் தீமைகளை பட்டியலிட்டு புகைபிடிக்கத் தூண்டும் உணர்வு ஏற்படும் பொழுது அதைப் பார்த்துக் கொள்ள வேண்டும்.

9. புகை பிடிக்கத் தூண்டும் சூழ்நிலை ஏற்படும்போது அதை எதிர்கொள்ள வேண்டும். புகைபிடிப்பதை நிறுத்திய முதல்வாரத்தின் போது உங்களுடைய வழக்கமான பழக்கவழக்கங்களை மாற்றி கொள்ள வேண்டும்.

10. புகை பிடிப்பதை நிறுத்துவற்கான தேதியை குறித்து வைத்துக் கொண்டு அதை முற்றிலுமாக நிறுத்திவிட வேண்டும்.

11. புகை பிடிப்பதை நிறுத்த உதவும் கிளினிக்குகள் உங்களுக்கு நிக்கோட்டினுக்கு பதிலாக பயன்படுத்தக்கூடிய (நிக்கோட்டின் கம்ஸ், ஸ்ப்ரே, பட்ச்சஸ், மாத்திரைகள் மற்றும் உறிஞ்சிகள்) அல்லது புகைப்பிடிப்பதை நிறுத்த உதவும் சிகிச்சையை அளிப்பார்கள்.

12. புகைப்பிடிப்பதை நீங்கள் நிறுத்துவதை எல்லாரிடமும் சொல்ல வேண்டும். நண்பர்கள் மற்றும் உங்களது குடும்பத்தினர் இதற்கு உதவியாக இருப்பார்கள்.

❖ இரண்டாம் நிலை புகைப்பிடித்தல்

புகைப்பிடிப்பவர் புகைப்பிடிப்பதால் ஏற்படும் நச்சுப்புகையை வேறொருவர் சுவாசிப்பதே இரண்டாம் நிலை புகைப்பிடித்தல் ஆகும்.

இது இரத்த உறைதலை அதிகரிப்பதோடு, கெட்ட கொழுப்பு சத்தை அதிகரித்து இரத்த நாளத்தில் கொழுப்பை படியச் செய்கிறது. மற்றும் செல் சேதத்தை உருவாக்கும் காரணிகளை அதிகப்படுத்துகிறது.

மது அருந்துதல்

- ❖ மது அருந்துவதை தவிர்த்துவிட்டு எலுமிச்சை பானம் போன்ற உடலுக்கு ஆரோக்கியமான பானங்களை தேர்ந்தெடுக்க வேண்டும்.
- ❖ மது அருந்துவதை கட்டுப்பாட்டிற்குள் வைத்துக்கொள்ள வேண்டும். கட்டுப்பாடில்லாமல் மது அருந்துவது மிக மோசமான பிரச்சனைகளை ஏற்படுத்தும்.
- ❖ ஒரு வாரத்திற்கு 210 மில்லி லிட்டருக்கு அதிகமான மதுபானத்தை ஆண்கள் அருந்தக்கூடாது. ஒரு நாளைக்கு 40 மில்லி லிட்டருக்கு அதிகமான மது அருந்தக்கூடாது அதோடு வாரத்திற்கு இரண்டு நாட்களாவது மது அருந்தாமல் இருக்க வேண்டும்.
- ❖ ஒரு வாரத்திற்கு 140 மில்லி லிட்டருக்கும் அதிகமான மதுபானத்தை பெண்கள் அருந்தக்கூடாது. ஒரு நாளைக்கு 30 மில்லி லிட்டருக்கு அதிகமாக மது அருந்தக்கூடாது அதோடு வாரத்திற்கு இரண்டு நாட்களாவது மது அருந்தாமல் இருக்க வேண்டும்.

முடிவுரை

இந்த வாழ்க்கை முறை மாற்றங்களாவது உங்களுக்கு ஒரு வசதியான மற்றும் ஆரோக்கியமான வாழ்க்கை முறையை பின்பற்ற நிச்சயமாக உதவியாக அமையும்.

APPENDIX – E

PLAGIARISM REPORT

How does Viper work.....?

[+] Read more.. http://www.scanmyessay.com/

Plagiarism Report for 'Sanjeevini.Plag.doc'

Words Matched : 77

Match (%) : 1%

Unique words matched: 77

Unique Match (%) : 1

Matching content : 1%

Checked on : 21-02-2014

_____ _____

Signature of the Candidate **Signature of the Principal**

APPENDIX –F

PHOTOGRAPHS

DATACOLLECTION

ASSESSMENT

INDIVIDUALIZED EDUCATION

POST TEST